

# Thematic Research

**NBCFM Research** 



February 2, 2020

# Pipelines, Utilities & Energy Infrastructure

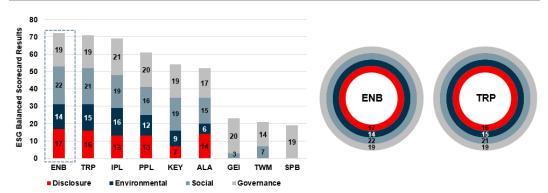
## ESG Scorecards: Pipelines & Midstream - safety first, disclosure catching up...

As Sustainable Investing continues its exponential momentum into 2020, we introduce our second ESG Scorecards thematic, this time focused on the Pipelines & Midstream names while rounding out our entire coverage list along with our previous Power & Utilities Scorecards (note here). Relative to the Power & Utilities, our lower rankings for the Pipelines & Midstream companies as a group reflect: 1) the fact that only a handful of companies have produced a Sustainability report (ALA, ENB, IPL, PPL, TRP), while the others receive partial scores for select ESG information disclosed (GEI, KEY, SPB, TWM), and 2) Pipelines & Midstream companies are currently in the process of establishing their ESG targets, whereas the Power & Utilities have for the most part locked down their long-term goals for emission reductions, intensities and employee diversity. That said, we view this disclosure and target setting catch-up period as an attractive investment opportunity given the impressive safety track records and relatively low environmental footprints across our Pipelines & Midstream coverage list. In other words, as more companies comply with globally recognized environmental reporting standards and establish attractive ESG goals, we anticipate increased fund flows from Sustainability investors, helping to close the valuation gap relative to the Utilities (P&M P/AFFO:12.1x vs. Utilities P/AFFO: 14.2x).

We have maintained our high-level ESG Scorecard structure, allocating an equal 25% towards four categories: (1) Disclosure; (2) Environmental; (3) Social; and (4) Governance. Within Environmental, we tweaked our ranking criteria slightly, recognizing the heightened scrutiny and social awareness around pipeline operations - adding a Pipelines releases, Inspection & Replacement section. On the Social side, we once again track employee safety, retention, and diversity, system reliability and cybersecurity, impact on communities as well as engagement with Indigenous groups. Finally, Governance rankings remain based on diversity and independence of the board, alongside audit and compensation.

Overall, ENB and TRP stand out as ESG leaders within the Pipelines & Midstream space with an honourable mention going to IPL. With capital allocation decisions becoming more and more influenced by the ESG compass, we naturally expect to see the economic benefits of best-in-class Sustainability practices flow into financial results while buoying valuation multiples. Overall, we commend all the companies on our Pipelines & Midstream coverage list for actively engaging and focusing on sustainable business practices, while imploring all companies to continue raising the bar with respect to disclosure and establishing accretive ESG targets. Putting it all together, we recommend investors add Enbridge and TC Energy to their environmentally minded and socially conscious portfolios.

Exhibit 1: ESG Balanced Scorecard Results by Company



Source: Company Documents, NBF Estimates

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#### **INDUSTRY RATINGS**

Energy Equipment/Services; Oil/Gas/Consumable Fuels: Overweight

Chemicals: Market Weight Utilities: Underweight

NBF Economics & Strategy Group



## ESG Scorecards: Pipelines & Midstream

**Exhibit 2: ESG Balanced Scorecard** 

Disclosure		ALA	ENB	GEI	IPL	KEY	PPL	SPB	TRP	TWM
ESG Reporting Standards	5	4	4	n/a	4	3	4	n/a	4	n/a
Annual Sustianability Report	5	4	5	n/a	5	1	5	n/a	5	n/a
Metrics Easily Displayed	5	3	4	n/a	4	3	4	n/a	4	n/a
Targets Easily Displayed	5	1	1	n/a	0	0	0	n/a	1	n/a
Targets Reported if Achieved or Not Achieved	5	2	3	n/a	0	0	0	n/a	2	n/a
Disclosure Total	25	14	17	n/a	13	7	13	n/a	16	n/a
Environmental		ALA	ENB	GEI	IPL	KEY	PPL	SPB	TRP	TWM
Pipeline Releases, Inspection & Replacement	4	n/a	4	n/a	4	n/a	4	n/a	3	n/a
GHG Emissions Relative to Peers	5	1	3	n/a	4	3	2	n/a	4	n/a
GHG Emissions Intensity Reduction Progress	4	n/a	1	n/a	2	n/a	2	n/a	2	n/a
GHG Emissions Reduction Plan Outlined	4	1	n/a							
Water & Waste Management	4	1	3	n/a	3	3	1	n/a	3	n/a
Biodiversity Management	4	3	3	n/a	3	3	3	n/a	3	n/a
Environmental Total	25	6	14	n/a	16	9	12	n/a	15	n/a
Social		ALA	ENB	GEI	IPL	KEY	PPL	SPB	TRP	TWM
Employee Voluntary Turnover	4	n/a	3	n/a	2	3	n/a	n/a	3	n/a
Employee Diversity	4	2	3	n/a	2	2	1	n/a	3	n/a
Safety	4	3	4	n/a	3	3	4	n/a	3	n/a
System Reliability & Cybersecurity	4	2	4	n/a	3	3	3	n/a	3	n/a
Community Investment	4	3	4	3	4	4	4	n/a	4	4
Indigenous Engagement	5	5	4	n/a	5	4	4	n/a	5	3
Social Total	25	15	22	3	19	19	16	n/a	21	7
Governance		ALA	ENB	GEI	IPL	KEY	PPL	SPB	TRP	TWM
Female Representation on the Board	5	5	5	4	5	5	4	4	4	4
Independent Representation on the Board	5	3	4	4	5	3	5	4	5	3
Tenure on the Board	5	4	5	5	5	5	4	4	5	3
Compensation tied to Stock Performance & ESG	5	1	2	4	2	2	4	2	2	1
Auditors	5	4	3	3	4	4	3	5	3	3
Governance Total	25	17	19	20	21	19	20	19	19	14
Total Score	100	52	72	23	69	54	61	19	71	21

Source: Company Documents, NBF Estimates

Regarding disclosure, five companies have produced a Sustainability Report - ALA, ENB, IPL, PPL and TRP. We anticipate KEY, GEI and SPB will likely complete a Sustainability Report in 2020. At this time, most companies are informed by both GRI and SASB standards, while informed or considering TCFD standards for climate-related disclosures. Where the Pipelines & Midstream companies fall short of the Power & Utilities group is with respect to reporting targets and progress - i.e., outlining specific dates for reducing GHG emissions or intensities.

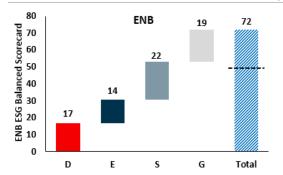
On the Environmental front, with heightened public scrutiny and headline risk attached to pipelines and growing public sensitivity related to the safety record of pipelines as a mode of transporting hydrocarbons, we show that both pipelines and rail are indeed extremely safe methods of transportation, posting spill rates of 0.0001%. However, we do recognize the need to address the spills, pipeline ruptures and releases; therefore, we added a sixth category within the Environment section pertaining to Pipeline Releases, Inspection & Replacement.

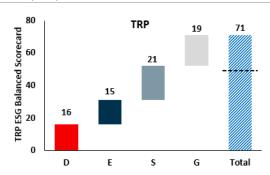
When assessing the Social aspect of ESG, there were many factors to consider, including safety, voluntary turnover, diversity, community involvement and indigenous engagement. We note several companies received full marks for Indigenous Engagement (ALA, IPL, TRP), while establishing employee turnover and diversity targets going forward will help each company pick up some easy points on the Scorecard.

Finally, looking at the Governance section of ESG, most companies scored quite well on female Board representation, Independence and Tenure. Areas of improvement include Compensation tied to stock price performance & ESG, as well as auditor turnover.

Overall, ENB and TRP stand out as ESG leaders with an honourable mention going to IPL. As such, we recommend investors add Enbridge and TC Energy to their environmentally minded and socially conscious portfolios.

Exhibit 3: ESG Balanced Scorecard Results for ENB (LHS) and TRP (RHS)





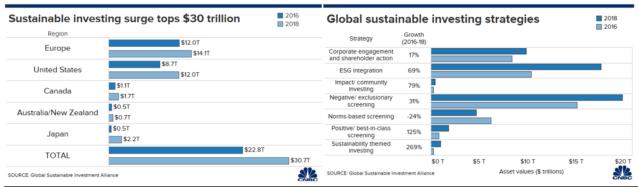
Source: Company Documents, NBF Estimates



# Disclosure > First step towards managing is measuring

Although Sustainable Investing is considered to be in its infancy, several companies have been taking advantage of the opportunity to measure and report Environmental, Social and Governance (ESG) practices on a quantitative and qualitative basis. That said, we firmly believe companies can no longer expect to access the public markets without first providing reliable ESG disclosure. As shown below, the surge in popularity of Sustainable Investing reached >US\$30 trillion in 2018 from 2016 levels of US\$23 trillion. As sustainable investors continue to grapple with how best to compare and contrast ESG metrics and performance across companies and sectors, issuers will need to allocate sufficient resources towards measuring and disclosing complete and accurate metrics within each ESG category.

Exhibit 4: Global Sustainable Investing Amount (LHS) and Strategies (LHS)



Source: CNBC, Global Sustainable Investment Alliance

Meanwhile, there is also a strong movement underway towards ESG reporting becoming standardized by a number of global exchanges. On December 18<sup>th</sup>, the Hong Kong Exchange (HKEX) put pen to paper and issued all listed companies to provide ESG disclosure, requiring all companies to now report on ESG metrics from July 1, 2020 onward. Meanwhile, the European Union, the UK and China currently have voluntary ESG disclosure practices but have started working towards making standardized ESG disclosure mandatory in the future. We anticipate that ESG reporting requirements will continue to ripple through each country and will eventually become standardized, much like financial reporting.

Overall, we firmly believe that complete and accurate ESG information needs to be disclosed by companies on an annual basis, therefore we allocated 25% of our ESG Scorecard towards disclosure practices. We have broken down the rating scale into five distinct buckets, which include: (1) annual Sustainability report achieved; (2) ESG reporting standards used; (3) ESG metrics displayed; (4) ESG targets outlined; and (5) ESG targets achieved. In general, the Pipelines & Midstream companies scored relatively strong on the first three out of five categories; however, when it comes to outlining and reporting progress towards ESG targets, our Pipelines & Midstream coverage list falls short of our expectations, especially when compared with the Power & Utilities group. We, therefore, see upside to our Disclosure ratings as companies progress towards reporting specific and measurable ESG targets alongside progress made and targets achieved.

Sustainability Reports: Across the Pipelines & Midstream sector, five companies have produced a Sustainability Report, including AltaGas, Enbridge, Inter Pipeline, Pembina and TC Energy. We anticipate Keyera, Gibson and Superior will likely complete a Sustainability Report in 2020. Of note, most of the Pipelines & Midstream companies produce a biennial Sustainability Report with a comprehensive quantitative datasheet of ESG metrics for the in-between years, whereas the Power & Utilities companies typically produce an annual Sustainability Report or an "integrated" annual report which includes Sustainability metrics. We find a biennial Sustainability Report with an updated ESG datasheet for the off years to be sufficient.

ESG Reporting Standards: Although ESG disclosure continues to evolve, there are two main ESG reporting standards that stand out: Global Reporting Initiative (GRI)<sup>1</sup> and Sustainability Accounting Standards Board

<sup>&</sup>lt;sup>1</sup> <u>Global Reporting Initiative (GRI)</u> is an international independent standards organization for sustainability reporting, which helps businesses report non-financial information on a range of economic, environmental and social impacts.



(SASB)<sup>2</sup>. Meanwhile, looking specifically at environmental and GHG emission reporting standards, we note the Task Force on Climate-related Financial Disclosures (TCFD)<sup>3</sup>, the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard<sup>4</sup> and the CDP Worldwide (previously referred to as the Carbon Disclosure Project)<sup>5</sup>. When looking at each company based on ESG standards, we track which standards are stated in the report and what level of compliance the company uses for those standards - i.e., are the company's ESG results compliant or informed by the specific standard, versus merely considering standardization measures. At this time, most companies that have produced a Sustainability Report are informed by both GRI and SASB standards, while informed or considering TCFD standards for climate-related disclosures.

ESG Metrics displayed: No different than a balance sheet, income statement or cash flow statement, we believe companies should provide quantitative ESG data that is outlined in a standardized chart with multiple years of data. Moreover, a one-page summary sheet of key metrics at the front of the report and a multi-page comprehensive breakdown of quantitative data and the specific standard applied at the back of the report, also prove to be very useful. In addition, we note that companies are starting to provide a specific section of their website dedicated to Sustainability metrics with data outlined on the website. Although we would consider this "best practice", we do view the online approach as complementary to a standardized ESG/Sustainability report.

ESG Targets Outlined and Achieved: The evolution of Sustainability reporting has led to investors calling on companies to not only provide accurate historical information but also pursue and improve sustainability objectives. As such, it is increasingly important for companies to create and publicly disclose specific and measurable ESG targets, alongside outlining progress made and if the targets have been achieved or not. This is also indicative of good governance and naturally improves accountability while breaking down strategic visions into smaller bite-size achievements, enabling companies to efficiently achieve overarching goals. At this time, the Pipelines & Midstream companies fall short of expectations with respect to reporting targets and progress, especially when compared with the Power & Utilities group - i.e., outlining specific dates for reducing GHG emissions.

Although currently voluntary, and recognizing there is not a "one size fits all" approach to ESG reporting at this time, we believe it is integral for companies to improve ESG disclosure moving forward. We commend the companies on our coverage list for walking down the ESG reporting trail and would label ENB and TRP as disclosure leaders, with an expectation that smaller peers will follow suit, especially when it comes to establishing ESG targets and performance measurements.

**Exhibit 5: Pipelines & Midstream Disclosure Practices** 

Category	ALA	ENB	GEI	IPL	KEY	PPL	SPB	TRP	TWM
Sustainability Report	Annual	Annual	n/a	Biennial	n/a	Biennial	n/a	Annual	n/a
Reporting Standard									
GRI	Considered	Informed	n/a	Informed	n/a	Informed	n/a	Informed	n/a
SASB	Informed	Considered	n/a	Informed	n/a	Informed	n/a	Informed	n/a
TCFD	Considered	Informed	n/a	Informed	n/a	Informed	n/a	Informed	n/a
CDP	Informed	Informed	n/a	Informed	Informed	n/a	n/a	Informed	n/a
ESG Annual Summary Chart	Yes	Yes	n/a	Yes	Yes	Yes	n/a	Yes	n/a
Target & Performance Chart	No	No	n/a	No	No	No	n/a	No	n/a

Source: Company Documents, NBF

<sup>2</sup> <u>Sustainability Accounting Standards Board (SASB)</u> is the first complete set of industry-specific sustainability accounting standards covering financially material issues in order to identify and communicate significant opportunities for sustaining long-term value creation.

<sup>&</sup>lt;sup>3</sup> <u>Task Force on Climate-related Financial Disclosure (TCFD)</u> was established by the Financial Stability Board in December 2015 to develop a set of voluntary, consistent disclosure recommendations for use by companies in providing information to investors, lenders and insurance writers regarding specific climate-related financial disclosure.

<sup>&</sup>lt;sup>4</sup> <u>Greenhouse Gas Protocol Corporate Accounting and Reporting Standard</u> provides requirements and guidance for companies when preparing corporate-level GHG emission inventor, which includes specific guidance on the seven greenhouse gases and the difference in Scope 1 and 2 emissions.

<sup>&</sup>lt;sup>5</sup> <u>CDP Worldwide</u> is a not-for-profit charity running the global environmental disclosure system which supports thousands of companies, cities, states and regions to measure and manage risks and opportunities related to climate change, water security and deforestation.



# Environmental > 99.999% of volume transported safely

Over the past two years, Environmental subject matter related to ESG has taken centre stage. Recall, on November 28<sup>th</sup>, the European parliament officially declared a global "climate and environmental emergency" and although it was mostly symbolic in nature, it led to the European Union (EU) leaders (minus Poland) committing to the "European Green Deal" policy on December 12<sup>th</sup>, which essentially aims to reach carbon neutrality for the 28-member bloc by 2050. Elsewhere, there has also been a shift in the focus of energy companies, with an emerging trend for companies to pledge "Net Neutral by 2050". As such, we believe more focus is being placed on the environmental component of ESG, with rising demand for enhanced disclosure pertaining to absolute GHG emissions, GHG emissions intensity in addition to biodiversity, land reclamation, waste and water management. Meanwhile, with heightened public scrutiny and headline risk attached to pipelines, there appears to be a growing public misperception related to the safety record of pipelines as a mode of transporting hydrocarbons.

## Spills & releases

In general, there are four means of transporting hydrocarbons to market: pipelines, rail, trucks and ships. Looking at Canada specifically, with most of the ~4.3 mmbpd of oil production available for export originating from landlocked Alberta, over 99% of oil exports are transported by pipeline and rail. The next obvious question becomes "Which is safer, pipeline or rail?" Although this is a loaded question, which involves looking at the impacts of spills/releases on human safety, property destruction, land and water impact, and emissions emitted, it has been determined that both pipelines and rail are indeed extremely safe methods of transportation, posting spill rates of 0.0001% of volume transported.

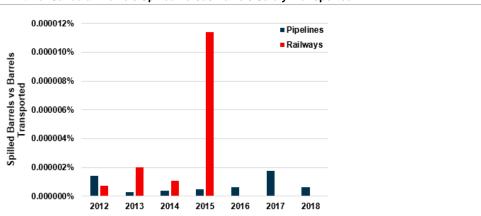


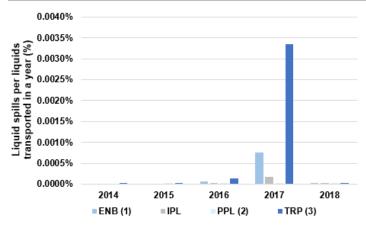
Exhibit 6: Canadian Barrels Spilled versus Barrels Safely Transported

Source: The Railway Association of Canada, NBF

When looking specifically at our coverage universe on barrels of oil spilled versus barrels of oil safely transported, the average results in 0.00038% - i.e., the pipeline companies on our coverage list have also delivered over 99.99% of volumes without a spill. We believe this metric dispels any public or investor perception related to the transportation of crude oil by both pipeline and rail.

<sup>&</sup>lt;sup>6</sup> Recall, the target year of 2050 is the year the United Nations Intergovernmental Panel on Climate Change (IPCC) has stated as the target year necessary for global warming to remain below the 1.5°C mark.

Exhibit 7: Liquid Hydrocarbon Spills versus Liquid Hydrocarbons Transported in a Year

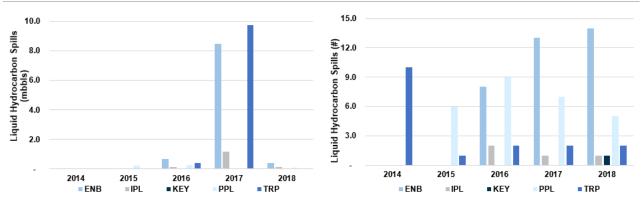


<sup>(1)</sup> ENB's total volumes include the reported Mainline volumes in addition to including the volumes of Express (280 mbpd), Southern Lights (180 mbpd) and its 27% interest in the Bakken pipelines DAPL/ETCOP (470 mbpd), based on total capacity and an assumed 90% utilization rate.

However, although we commend our companies for having posted such strong safety/delivery rates, we do recognize the need to address the spills, pipeline ruptures and releases; therefore, we added a sixth category within the Environment section pertaining to Pipelines Releases, Inspections & Replacement. In addition to the obvious need for oil and gas pipeline safety, building a new pipeline is now an extensive and costly process, involving lengthy environmental impact assessment reviews, spill analysis, and adherence and compliance with stringent standards and specifications. As such, we believe it is crucial for companies to not only report pipeline incidents but also establish and achieve zero incident targets.

Liquid Hydrocarbon Spills: Looking at our coverage, we highlight both the total number of spills per year, along with the total amount of liquid hydrocarbon spilled (mbbls). Both Enbridge and TC Energy experienced at least one significant oil spill in 2017, with Enbridge's spill occurring on its Mainline pipeline (Line 2A) in February resulting in ~200,000 litres (1,250 bbls) of oil/condensate being released at an industrial site in Strathcona County, which was a result of a third-party strike. TC Energy's 2017 spill occurred on its Keystone pipeline in rural South Dakota with ~1.04 million litres being displaced (~6,250 bbls). We also note the Keystone pipeline experienced two other leaks in 2019, with ~1.4 million litres spilled in North Dakota in November (~9,000 bbls) in addition to the ~6,800 litres spilled earlier in the year (~40 bbls).

Exhibit 8: Liquid Hydrocarbon Spills Amount (LHS) and Number (RHS)



Note\* ENB is currently in a lawsuit surrounding the Line 2A pipeline spill that occurred in February 2017, with ENB filling a claim that the pipeline was punctured by the drilling of the Grand Rapids' 20-inch pipeline and not related to ENB activities.

Source: Company Documents, NBF

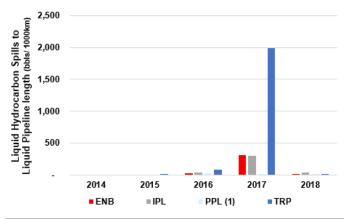
<sup>(2)</sup> PPL's total volumes include the reported volumes from Conventional Pipelines, Transmission Pipelines and Oil Sands Pipelines.

<sup>(3)</sup> TRP's total volumes include a 105% utilization rate on its 590 mbpd Keystone pipeline, while adding ~25% of the capacity on 800 mbpd Marketlink pipeline, assuming that Marketlink picks up additional Permian volumes. Source: Company Documents, NBF



When looking at the company's liquid hydrocarbon spills relative to the total length of liquids pipelines, Enbridge comes in well below TC Energy. Granted, TC Energy's liquids pipeline is primarily made up of the 590 mbpd Keystone pipeline and ~800 mbpd Marketlink system, together spanning ~4,900 km, while Enbridge, on the other hand, has approximately 27,500 km of liquid pipelines, transporting over 3 mmbpd of liquid hydrocarbons. Nonetheless, based on 2017 pipeline spills, TRP's ratio of barrels spilled per 1,000 km pipelines operated is significantly higher than Enbridge as shown in the chart below.

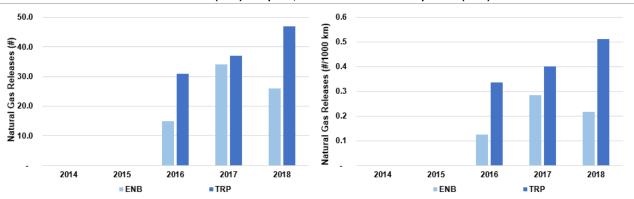
Exhibit 9: Liquid Hydrocarbon Spills Relative to Total Length of Liquid Pipelines



(1) PPL's total liquids pipeline length includes Alliance pipeline and all NGL & Liquids pipelines. Source: Company Documents, NBF

Natural Gas Releases: When looking at the topic of natural gas releases, we note that this area involves both an environmental aspect due to the fugitive emissions released as well as the potential for forest fires when a pipeline ruptures, in addition to a social component, pertaining to safety especially with natural gas pipelines operating under such high pressures. Looking at our coverage list, only Enbridge and TC Energy report the amount of natural gas releases. When we stack the two companies up against each other, we note that Enbridge has had a lower amount of natural gas releases based on total amount and as a ratio per 1,000 km of natural gas pipeline.

Exhibit 10: Natural Gas Releases Amount (LHS) and per 1,000 km of Natural Gas Pipelines (RHS) (1)



(1) Total pipeline length for each company was taken from the company's website and used for each of the three years. Source: Company Documents, NBF

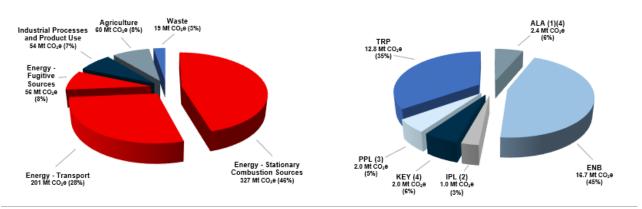
### Absolute GHG emissions

Given the social and political risks surrounding climate change, many investors have centred their ESG investment criteria around an absolute GHG approach – i.e., thresholds for total GHG emissions within their portfolios. Looking at total GHG emissions in Canada by industry, Energy sources including combustion, transport and fugitive sources contributed ~80% of Canada's total 716 million tonnes of carbon dioxide equivalent (MtCO<sub>2</sub>e) in 2017. We note that pipelines fall under the Energy – Transport segment (28%) and midstream activities are included in Energy – Stationary Combustion Sources (46%), while fugitive sources (8%) are also relevant to the



space. Overall, the Pipelines & Midstream companies have a variety of segments, which fall into each of the previously mentioned buckets above but granted that the total GHG emissions produced by these companies in 2017 was 37 MtCO<sub>2</sub>e, representing ~5% of Canada's total GHG emissions. <sup>7,8</sup>

Exhibit 11: Canada's 2017 GHG Emissions by Segment (LHS) and NBF Pipelines & Midstream 2017 GHG Emissions (RHS)



- (1) AltaGas' total GHG Emissions exclude WGL Holdings (not reported).
- (2) Inter Pipeline's total GHG Emissions exclude European Bulk Liquid Storage (not reported).
- (3) Pembina's total GHG Emissions exclude Veresen Midstream (not reported).
- (4) 2018 total GHG emissions were used for AltaGas and Keyera, to serve as a proxy for its 2017 emissions, since only 2018 data is disclosed. Source: Government of Canada, Company Documents, NBF

Although publishing an annual Sustainability report is relatively new within the Midstream group, the Pipeline companies (ENB & TRP) have been tracking total GHG emissions for several years. Given the Pipeline companies are significantly larger than the Midstream companies (ALA, IPL, KEY, PPL, SPB, TWM), when comparing GHG emissions on an absolute value we ranked them according to their Pipeline or Midstream peers below. Based on this ranking methodology, we note that TRP has held its total GHG emissions relatively constant over the past five years despite acquiring Columbia in 2016 for ~\$17 bln (average: 13.6 MtCO<sub>2</sub>e, 2018: 14.0 MtCO<sub>2</sub>e). Meanwhile, Enbridge reported the highest GHG emissions out of the entire group at 17.5 MtCO2e in 2018, with increasing GHG emissions since 2016, largely reflecting the ~\$37 bln acquisition of Spectra in 2017.

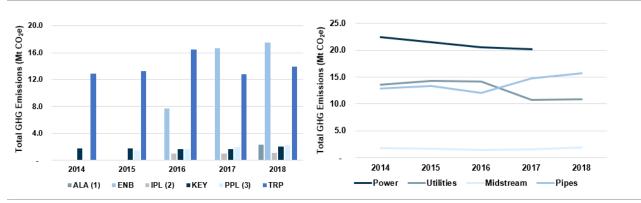
Within the Midstream group, AltaGas reported the highest total GHG emissions in 2018 at 2.4 MtCO<sub>2</sub>e, with Pembina close behind at 2.3 MtCO2e. However, we do note that certain Midstream companies excluded GHG emissions from different segments in their annual total GHG emissions figure, with Pembina not yet including its Veresen assets (acquired 2017), AltaGas not yet incorporating the WGL assets (acquired 2018), and Inter Pipeline not reporting its European Bulk Liquid Storage segment. We do note that IPL is currently in the process of selling its Bulk Liquid Storage assets, which is why the company did not include its emissions in the Sustainability report. Elsewhere, we will start comparing AltaGas versus its Utilities peers (ATCO, CU, EMA, FTS, H) once the company includes WGL emissions.

<sup>&</sup>lt;sup>8</sup> We note that some of the Pipelines & Midstream total GHG emissions include U.S. segments.

<sup>&</sup>lt;sup>7</sup> The Pipelines & Midstream ~\$37 Mt CO<sub>2</sub>e for 2017 takes actual GHG emissions reported by companies (ENB, IPL, PPL, TC Energy) and includes the emissions from the companies (ALA, KEY) that only reported 2018 numbers, assuming 2018 emissions serve as a proxy for 2017 emissions.



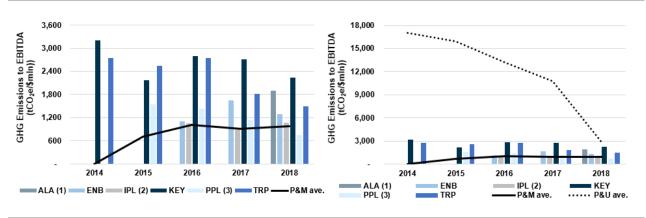




- (1) AltaGas' total GHG Emissions does not include WGL Holdings (not reported).
- (2) Inter Pipeline's total GHG Emissions does not include European Bulk Liquid Storage (not reported).
- (3) Pembina's total GHG Emissions does not include Veresen Midstream (not reported).
- (4) Power (CPX, TA), Utilities (ATCO/CU, EMA, FTS, H), Midstream (ALA, GEI, IPL, KEY, PPL, SPB, TWM), Pipes (ENB, TRP) Source: Company Documents, NBF, Bloomberg

Normalizing for size, we look at GHG emissions relative to annual EBITDA (GHGe per \$1 mln of EBITDA). Although we did not consider this metric in our inaugural Power & Utilities ESG report, we do anticipate incorporating this metric moving forward across our entire coverage list. We also note that the Midstream companies now can be stacked against Pipelines peers in addition to Utility peers (RHS chart on the following page). Overall, we highlight that the Pipelines & Midstream companies have historically had a lower GHGe/EBITDA ratio than Power & Utilities; however, the Power & Utilities group has trended down notably over the past four years given the conscious shift towards decarbonization and executing on GHG emissions reduction plans in place.

Exhibit 13: Total GHG Emissions (LHS) and GHG Emissions Intensity (RHS) by Company



- (1) AltaGas's total GHG Emissions excludes WGL Holdings (not reported).
- (2) Inter Pipelines' total GHG Emissions excludes European Bulk Liquid Storage (not reported).
- (3) Pembina's total GHG Emissions excludes Veresen Midstream (not reported).
- Source: Company Documents, NBF, Bloomberg

# **GHG Emissions Intensity**

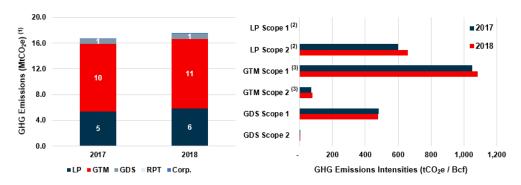
Comparing the Pipelines & Midstream space on an intensity basis proved to be a difficult undertaking given the number of different business segments, which need to be stacked up against each other separately (i.e., liquids pipelines, natural gas pipelines, midstream, power, and utilities). As well, we believe that emissions intensities illustrate a company's individual progress against itself over time. Overall, five companies in the space (KEY, ENB, IPL, PPL and TRP) report emissions intensities. In the section below we outlined each of the companies, except Keyera granted that the company provided only one year of data, in regards to GHG emissions intensities on a segmented year-over-year basis. Meanwhile, we implore the other midstream companies to start tracking and reporting intensity metrics going forward, both on a segmented basis and on a direct versus indirect basis.



<u>Enbridge</u>: broke down its GHG emissions intensity by business segment, providing granular detail for Liquids Pipelines (LP), Gas Transmission and Midstream in both Canada and the United States (GTM), as well as its Gas Distribution and Storage (GDS). The company did report an increase to its intensities in every segment on a Y/Y basis except for its GDS; however, we expect this trend to reverse moving forward given ENB's commitment to pursue innovative solutions to drive higher levels of productivity and in turn, increase energy efficiency. In addition, the company is currently expanding its portfolio to include more renewable assets, with ENB seeing significant opportunities in offshore wind projects in Europe.

Currently, ENB has an interest in 20 offshore and onshore wind projects, with some of the larger joint venture projects including the 609 MW German Offshore wind development (50%) and the 400 MW Rampion Offshore wind project (24.9%). Meanwhile, ENB is also currently developing other wind joint ventures, which include the 600 MW Dunkirk Offshore wind project (ISD 2025) and the 480 MW Saint Nazaire offshore wind project (ISD 2022), which is the first of four offshore wind farms that the company is developing in France along with its 50/50 partner EDF Renouvelables (Not Rated). We also note ENB's partnership with CPPIB, which will allow the company to further pursue future offshore wind projects while targeting an asset mix aligned with the global energy mix.

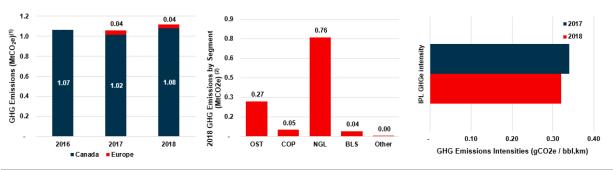
Exhibit 14: Enbridge GHG Emissions (LHS) and GHS Emissions Intensity (RHS)



- (1) GHG Emissions are equal to million tonnes of carbon dioxide equivalent (MtCO2e).
- (2) Liquids Pipelines GHG emissions intensity was converted to tCO2e/Bcf from tCO2e/kbbl at a conversion rate of 1 boe = 6,000 cf.
- (3) GTM GHG emissions were reported separately between Canada and the U.S. We take the simple average of the two for both Scope 1 and Scope 2. Source: Company Documents, NBF

<u>Inter Pipeline:</u> Upon diving into the CDP disclosure for Inter Pipeline, the company broke out its GHG emissions by location as well as segment in 2018. Looking at the left-hand chart we notice that the company's absolute GHG emissions have remained relatively even in Canada over the past three years, with a small uptick in total emissions related to incorporating the European operations. Transitioning to the middle chart, we notice that almost 75% of the company's total emissions stem from its NGL Processing business unit, with Inter Pipeline's Cochrane gas plant contributing the most. Finally, when we consider the company's GHG emissions intensities on a year-over-year basis, we observe a modest decrease from 2017 to 2018.

Exhibit 15: Inter Pipeline GHG Emissions by Location (LHS) and Segment (Middle) and GHG Emissions Intensity (RHS)



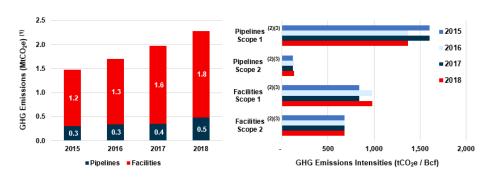
<sup>(1)</sup> GHG Emissions are equal to million tonnes of carbon dioxide equivalent (MtCO2e).

(2) OST = Oil Sands Transportation; COP = Conventional Oil Pipelines; NGL = NGL Processing; BLS = Bulk Liquid Storage Source: Company Documents, NBF



<u>Pembina:</u> The company reported four years of data for its Facilities & Pipelines segments based on both an absolute GHG emissions and an intensity basis. We commend the company for providing a thorough breakdown of its segmented emissions including reporting both Direct (Scope 1) and Indirect (Scope 2) emissions. As shown in the chart on the left-hand side on the following page, Pembina's absolute GHG emissions have increased on a yearly basis, which illustrates the company's attractive growth profile and its ability to execute new projects. Meanwhile, when looking at the chart on the right, we notice that PPL has reduced or held relatively constant its GHG emissions intensities year over year. That said, PPL has not yet included the Veresen assets acquired in 2017 within its reported GHG emissions or intensities. Granted that Veresen Midstream is primarily comprised of gas plants, we expect to see an uptick in both absolute emissions and intensity once reported.

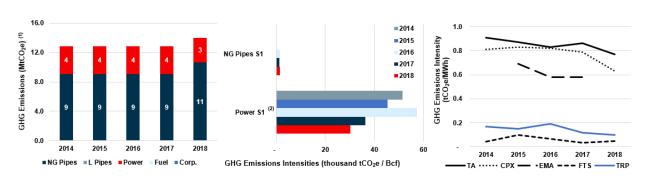
Exhibit 16: Pembina GHG Emissions (LHS) and GHG Emissions Intensity (RHS)



- (1) GHG Emissions are equal to million tonnes of carbon dioxide equivalent (MtCO2e).
- (2) Pipelines GHG emissions intensity was converted to tCO<sub>2</sub>e/Bcf from tCO<sub>2</sub>e/kbbl at a conversion rate of 1 boe = 6,000 cf.
- (3) Pembina acquired Veresen in 2017, however, it has not yet incorporated Veresen GHG emissions or emissions intensities into its totals. Source: Company Documents, NBF

<u>TC Energy:</u> Looking at TRP's absolute emissions, we note that the company has held its GHG emissions relatively flat year over year, with a small uptick in 2018. Considering emissions intensity, we note the declining profile of the company's power intensity, which can be largely attributed to asset sales over the past couple of years. Meanwhile, we note that TRP only provided Direct (Scope 1) emissions intensities, which do not fully reflect the company's liquids pipelines (namely Keystone) given most of the emissions from liquids pipelines are considered Indirect (Scope 2) in nature. We expect TRP will adopt reporting on Scope 2 emissions intensities moving forward across all business segments.

Exhibit 17: TC Energy GHG Emissions (LHS), GHS Emissions Intensity (middle) and Power Emissions Intensity (RHS)



- (1) GHG Emissions are equal to million tonnes of carbon dioxide equivalent (MtCO2e):
- (2) Power emissions intensity is converted to MtCO<sub>2</sub>e/Bcf based on a scale of 100 cf = 0.0302 MWh. Source: Company Documents, NBF

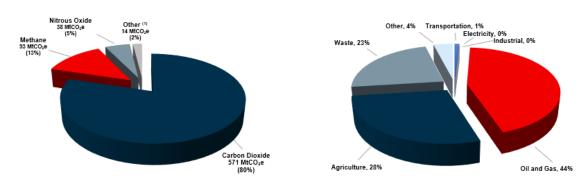
### Other Airborne Emissions

While the bulk of our Environmental impact analysis covers GHG emissions on a carbon dioxide equivalent basis, a new initiative in Canada has emerged surrounding the reduction of methane emissions from upstream oil and gas by 40-45%, with both the provincial and federal governments implementing regulations starting January 1,



2020 for companies to measure, monitor and report methane releases. We note this new initiative is part of Canada's overall national climate plan, which ultimately stems from the 2015 Paris Accord. Overall, methane comprises ~13% of Canada's total emissions, with Oil & Gas contributing ~44% when breaking down Canada's total GHG emissions by industry. We do note that the federal methane rules will look to reduce the amount of methane leaks via governing the detection and repair of natural gas leaks, limiting methane emissions from compressors and disallowing venting gas from fracking operations.

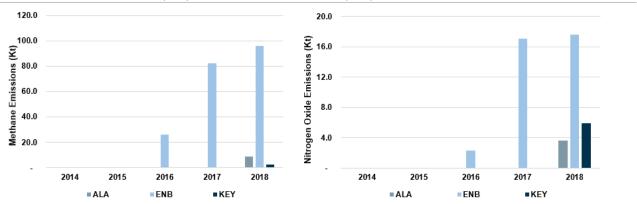
Exhibit 18: Canada's 2017 GHG Emissions by Segment (LHS) and Canada's 2017 Methane Emissions by Segment (RHS)



(1) The "Other" category includes perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>). Source: Government of Canada, NIR 2017

As a cousin to carbon dioxide, methane has ~25x the global warming potential (GWP) of carbon dioxide but remains in the atmosphere for only ~12 years. Elsewhere, nitrous oxide ( $N_2O$ ) is another high potent GHG emission with 265-289 times the GWP of carbon dioxide and is considered a primary threat to the thinning of the ozone layer. In 2017, nitrous oxide contributed ~5% of Canada's total emissions. Given the high GWP potential of these emissions and the new emissions reduction targets put in place, we anticipate more attention being placed on methane with a modest focus towards nitrous oxide. Therefore, we recommend more companies provide a breakdown of each GHG emissions by type moving forward. As shown below, ENB has done a good job reporting its methane and nitrous oxide emissions, albeit we would like to see the trend reverse moving forward.

Exhibit 19: Methane Emissions (LHS) and Nitrous Oxide Emissions (RHS)



Source: Company Documents, NBF

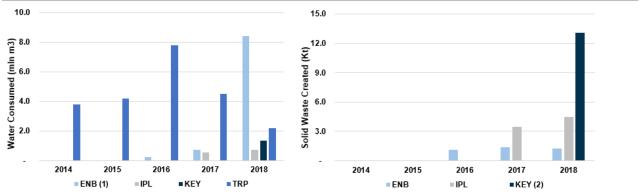
# Land & Water Management

Environmental sustainability also encompasses how each company treats land and water, with growing awareness towards biodiversity, land reclamation, water management and waste management, in order to minimize their overall impacts on the environment. We note the companies in our space that do an excellent job of monitoring and implementing recovery, maintenance, and preservation strategies for wildlife and endangered species. As well, we report on the companies taking initiatives to reduce both waste and water consumption. As a result of the numerical disclosure on these four topics being spotty at best, our highlights are limited to water



consumption and waste created in graphical form below while outlining specific biodiversity and land reclamation initiatives in *Appendix B*.





 In 2018, ENB used a significantly larger volume of water compared with previous years, due to several large pipeline construction and maintenance projects (L3RP, Line 4 Replacement, Seaway Connectivity and NEXUS gas transmission pipeline).
 Keyera's solid waste created includes an undefined amount of liquid waste.
 Source: Company Documents, NBF

**Biodiversity:** Given the length of pipelines, crossing international and state/provincial borders, several different plants and animals along with their habitats are impacted. Companies have implemented various biodiversity initiatives in order to adhere to the Species at Risk Act<sup>9</sup>. Some of these initiatives include specific case studies in different areas to better understand the migration patterns of animals, mitigation plans and strategies when animals need to be relocated or reinstated in an area, as well as monitoring programs to better understand native species. For a breakdown of the company-specific biodiversity initiatives see Appendix B.

Land reclamation: It has always been a responsibility of utmost importance for energy infrastructure companies to conduct landscape and environmental studies and assessments, while assessing the various risks that construction and operational activities have on the soil, land, plants, wildlife and watersheds. The companies in our Pipelines & Midstream coverage list have implemented numerous land reclamation initiatives, including contouring disturbed areas, re-establishing drainage, replacing topsoil and subsoil, re-vegetation and land management. For a breakdown of the company-specific land reclamation initiatives see Appendix B.

**Water management:** With a number of pipelines required to cross rivers, lakes, oceans and waterbeds, companies within our coverage universe are very mindful of how contamination can affect water. In addition, companies are paying more attention to water consumption, with four of the companies in our coverage universe reporting the amount of water consumed per year (chart on the previous page). For a breakdown of the company-specific water management initiatives see Appendix C.

**Waste management:** When considering waste management, we commend the companies that break out waste consumption into liquid and solid form in addition to reporting the amount of waste created, waste recycled and the amount of waste sent to landfills. Currently, within our space only Enbridge, Keyera and Inter Pipeline report quantitatively on waste management, with Inter Pipeline reporting both liquid and solid waste. For a breakdown of the company-specific waste management initiatives see **Appendix** C.

## Innovative & Leading-edge Technologies

Addressing global climate change extends beyond reducing GHG emissions and requires longer-term, innovative solutions driven by technology. As such, we emphasize a few of the companies within our coverage universe that have creative technological initiatives pertaining not only to a reduction in carbon footprint, but also energy conservation and growth within the renewable landscape. For a breakdown of the company-specific innovation & new technology initiatives see Appendix D.

<sup>&</sup>lt;sup>9</sup> The Species at Risk Act (SARA) was adopted in 2002 as part of Canada's National Strategy for the Protection of Species at Risk. The purpose of the SARA was to prevent wildlife species in Canada from disappearing, to provide for the recovery of wildlife species that no longer exist in the wild or are endangered and/or threatened as a result of human activity.



# Social > Power to the People

We reiterate our stance that when assessing the Social category in ESG, it boils down to managing relationships with three major stakeholders: employees; communities; and Indigenous relationships. Upon diving into the social category for a second time, we modestly altered our metrics used to rate companies, now breaking them down into six categories (previously five), which include: (1) employee physical safety and mental health, (2) employee turnover; (3) employee diversity; (4) system reliability and cybersecurity; (5) community investment; and (6) indigenous engagement.

## **Employees**

Employee Physical Safety & Health: The analysis of a company's Social performance begins with the company's most valuable asset - its employees, with extreme emphasis being placed first and foremost on physical safety. As shown below, total Recordable Injury Frequency Rates (RIFR) have generally ranged between 0.3 to 1.4 per 200,000 hours across the Pipelines & Midstream space. We note that Pembina currently has one of the lowest employee RIFR rates in the space, remaining below 0.30 for the past four years, in addition to having the lowest Motor Vehicle Incident frequency (MVI) across the space. However, when factoring in PPL's contractors for both RIFR and MVI, we note significantly higher rates, with contractor RIFR increasing over the past couple years and contractor MVI being almost double that of Pembina's own employees.

We believe a company's partners and contractors should be held to the same safety standards. We highlight Enbridge in this regard, as the company's employee and contractor RIFR rates are basically equivalent year over year, signifying a strong commitment to safety performance across its entire workforce. In general, ENB stands out as a leader when it comes to safety, with the company recently consolidating its safety teams and establishing a safety and reliability system, known as ENB's Management System Structure, while also developing a Contractor Safety Committee to focus on continual improvement of ENB's contractor safety management processes.

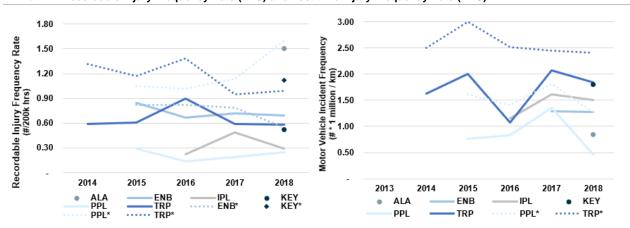


Exhibit 21: Recordable Injury Frequency Rate (LHS) and Lost-time Injury Frequency Rate (RHS)

Note: A \* beside the company ticker shows the company's contractor RIFR and MVI rates. Source: Company Documents, NBF

Employee Mental Health: In addition to a strong emphasis placed on physical health with standard benefit programs in place (medical, dental, vision, etc.), we are witnessing a growing awareness of mental health, with companies creating new employee wellness programs. Across the Pipelines & Midstream companies, only three companies reported on mental health (IPL, ENB and PPL) within their most recent sustainability report, with IPL having the most thorough and extensive mental health programs in our view. Specifically, we consider Inter Pipeline the leading company when it comes to mental health, due to its strong belief that mental health is part of the company's overall safety culture. In 2018, IPL started breaking down mental health barriers in the workplace by providing all its managers and employees training around The Working Mind (TWM), which is a mental health training initiative offered by the Mental Health Commission of Canada in order to promote mental



health and reduce stigma and discrimination regarding mental health in the workplace. In addition, IPL currently offers up to \$10,000 annually for each employee and dependents to apply to psychological counselling services.

Employee Voluntary Turnover: Assessing a company's ability to develop employees and offer opportunities to learn and enjoy time spent at work, we highlight the voluntary turnover rate of each company. As shown in the chart below, we notice that most companies in the Pipelines & Midstream space hover around the ~5% voluntary turnover mark, with TRP being the most transparent by reporting metrics over the past five years. On the other hand, we note the concerning increase in turnover rate at IPL from 2017 to 2018, which jumped from 6% to 11%. Meanwhile, we also commend the companies for reporting employee volunteer hours, exemplifying a company's commitment to support and give back to those in need. One thing we would recommend companies report moving forward would be on the dollar amount per employee spent on additional employee training. We believe growth and enjoyment at work is fundamental to an energized culture and strong performance.

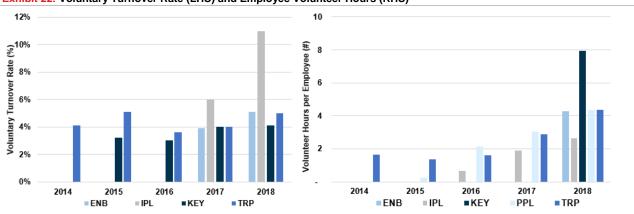


Exhibit 22: Voluntary Turnover Rate (LHS) and Employee Volunteer Hours (RHS)

Source: Company Documents, NBF

Employee Diversity: Fundamental to a sustainable business strategy includes supporting human rights, diversity and inclusion. We note that every company within our coverage list has an employee code of conduct that employees are required to comply with, typically requiring all employees to sign off on a yearly basis. Elsewhere, employee diversity is extremely important for attracting, motivating and retaining top talent. We also believe it is essential for every employee in a company to have an equal opportunity to grow. Companies in our coverage list have started reporting the number of females in both the workplace and in management, with some companies, namely TC Energy and Pembina, going one step further and disclosing the percentage of employees who are minorities, indigenous and/or disabled. Upon taking this further disclosure into consideration, we altered the way we rate employee diversity, now encompassing the need to report on all four of these employee categories. However, with only limited data provided, we are limited to highlighting a chart for females in the workplace and in management.

As shown in the charts on the following page, Enbridge has the highest number of females in its workplace relative to its peers, while the company also has an increasing number of women in senior management year over year. TC Energy has also experienced an increase in females in senior management roles on an annual basis, with the company reporting 29% in 2018. We would like to see the number of women in the workplace and in senior management roles increase to an absolute ~30% minimum threshold, with a longer-term goal for reaching gender parity for senior management. Overall, we believe there is work to be done within the Pipelines & Midstream coverage universe to achieve this ~30% standard and expect companies such as Pembina will look to incorporate disclosure and set targets for female senior management representatives within future reports.

Elsewhere, Enbridge sets the bar for reporting the average salary difference between males and females at each level. Given female base compensation has historically ranged 5-20% below male base compensation (depending on level), ENB announced that it would participate in the "Equal by 30" initiative. "Equal by 30" is an international commitment by both public and private-sector organizations to work towards equal pay, equal leadership and equal opportunities for women in the energy sector by 2030. We expect all companies will migrate towards the "Equal by 30" initiative in addition to numerically reporting average compensation by gender.



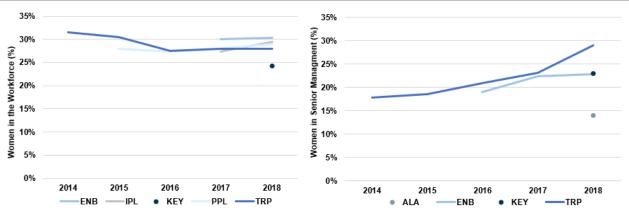


Exhibit 23: Females in the Workplace (LHS) and in Management (RHS)

Source: Company Documents, NBF

## System Reliability & Cybersecurity

System Reliability: Depending on the industry, system reliability reported metrics can be unique. For Utilities, there are two key metrics when it comes to electricity grid reliability: (1) System Average Interruption Duration Index (SAIDI) and (2) System Interruption Frequency Index (SAIFI). SAIDI is the primary metric that has been historically stated for distribution, and it essentially represents the customer hours of interruption per customer served. We would recommend both Enbridge and AltaGas reporting this metric moving forward, given that they are the two companies in the Pipelines & Midstream space that have a utility segment within their company.

Meanwhile, for the Pipeline & Midstream companies, we believe system reliability is best shown through pipeline integrity work, specifically illustrated quantitatively through the reported amount of integrity digs, in-line inspections, and kilometres of in-line inspections. We believe this is important due to increased safety standards related to operating pipelines and the necessity of further measures needing to be taken to make sure spills and releases do not occur. We note pipeline integrity and safety involves both an environmental and a social component; therefore, we included a rating system within both the Environmental section and the Social section pertaining to this subject matter. We do note that improving system reliability often requires investment in forecasting tools, new technology and upgrading infrastructure and processes.

Looking at our coverage universe, only four companies report pipeline in-line inspections. Of note, an in-line inspection allows for the detection of an internal and external corrosion, cracking, strain, fatigue, dents and legacy manufacture defects. TC Energy has reported an increased number of inspections as well as kilometres inspected. Elsewhere, we note that Enbridge has also been increasing the annual number of kilometres of inline inspections.

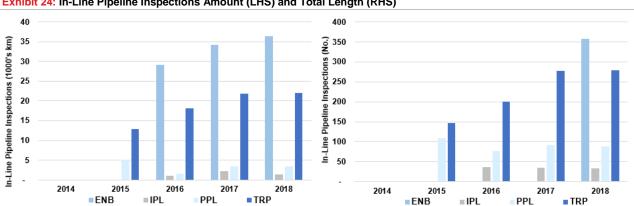


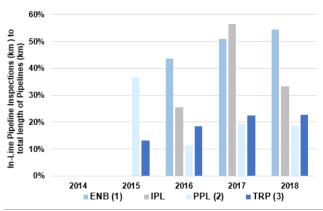
Exhibit 24: In-Line Pipeline Inspections Amount (LHS) and Total Length (RHS)

Source: Company Documents, NBF



In order to compare system safety and reliability standards by company, we conducted an analysis based on the length of in-line pipeline inspections relative to the company's total length of pipelines. As shown in the chart below, ENB has the highest ratio of in-line pipeline inspection to total length of pipelines operated, with the percentage increasing year over year. Overall, we believe an increasing number of inspections is required across the Pipelines & Midstream sector in order to reach the goal of zero incidents.

Exhibit 25: Length of In-Line Pipeline Inspections Amount Relative to Total Pipeline Length



- (1) ENB's total pipeline length includes liquids pipelines and natural gas pipelines from both Enbridge and Spectra in 2017 and 2018, while 2016 only includes Enbridge.
- (2) PPL's total pipeline length includes liquids pipelines (plus Alliance) and natural gas pipelines.
- (3) TRP's total pipeline length includes liquids pipelines and natural gas pipelines.

Source: Company Documents, NBF

Cybersecurity: With critical infrastructure relying on information technology systems to transmit, store, monitor and operate assets, cybersecurity programs are essential to the sustainability of any Pipeline or Midstream company. Companies also conduct regular cybersecurity threat drills in order to be as best prepared for any sort of breach. Only two companies in the Pipelines & Midstream space reported on cybersecurity systems and processes; however, we anticipate that other companies in our coverage universe are aware of cybersecurity risks and would recommend a more detailed breakdown of current processes and procedures in future sustainability reports. In addition, we would also recommend companies break down the amount each company spends on cybersecurity on a yearly basis. For a breakdown of the company-specific cybersecurity initiatives see Appendix E.

### Communities.

As an integral part of sustainability, we look at how companies build relationships with community groups and organizations while looking at company projects that are aimed at empowering communities and creating healthy and sustainable environments. Given that every company operates in a multitude of different communities in different locations, it is extremely hard to make comparisons based on different community programs. That said, with most companies now quantitatively reporting community investment spend, we view this as a tangible way to compare companies across our coverage universe. Although a dollar amount is not necessarily representative of the ultimate impact a company has on the community, we view community spending as a percentage of consolidated EBITDA as a useful quantitative method in comparing and contrasting each company's contribution. Overall, we note that TC Energy and Enbridge have historically had the highest community investment on a total dollar amount, while on a community investment relative to EBITDA ratio Pembina holds the top spot. We do note that although both Gibson and Tidewater have not yet published a Sustainability report, they have reported the amount invested in communities this past year within their investor presentations; therefore, we included them in this analysis.



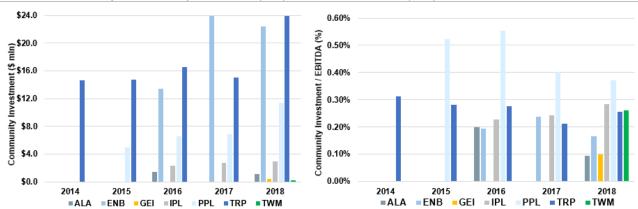


Exhibit 26: Community Investment Spend Amount (LHS) and relative to EBITDA (RHS)

Source: Company Documents, NBF

## Indigenous Involvement - Industry Leaders

With most of the companies in the Midstream sector having operations in Alberta and British Columbia, where ~30% of Canada's First Nations population reside, we believe it is integral for companies to take a collaborative approach to including Indigenous communities as partners - both from a consultation and economic perspective. Furthermore, with the Pipeline companies having pipelines that span across many tribal lands, proving the ability to build and maintain strong relations with indigenous groups is fundamental to sustainability. Overall, we believe it is paramount that companies establish relationships with indigenous communities that are built on a foundation of trust and respect, with an emphasis on understanding the environmental impact of projects from a culture, heritage and tradition standpoint on par with scientific studies and evidence.

When assessing each company's performance with respect to Indigenous involvement on a quantitative basis, we look at total Indigenous investment in addition to total Indigenous investment dollars relative to the company's EBITDA. Only two companies in the Pipelines & Midstream coverage universe reported this metric, with Enbridge outpacing TC Energy on both fronts. We commend Enbridge for not only increasing its absolute investment but also the percentage of Indigenous Investment relative to its total EBITDA.

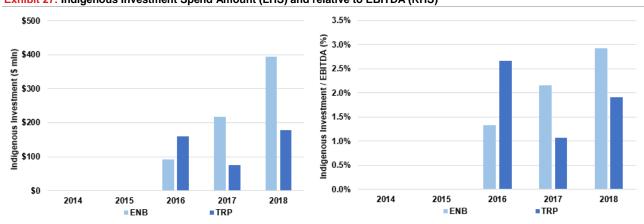


Exhibit 27: Indigenous Investment Spend Amount (LHS) and relative to EBITDA (RHS)

Source: Company Documents, NBF

We also consider a spectrum of qualitative criteria, which includes: (1) culture awareness programs; (2) training and growth opportunities; (3) indigenous community improvements; (4) business relationships; and (5) supporting entrepreneurship and independence. Overall, with Indigenous involvement being less quantitative and more qualitative in nature, we outlined each of the company's Indigenous engagement strategies in *Appendix E*.



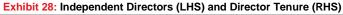
## Governance > Tone from the Top

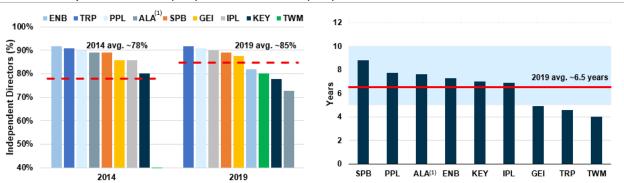
Sustainability begins and ends with leadership. Strategies may vary between companies when it comes to implementing sustainability programs; however, execution and accountability is what sets apart the quality of the Board of Directors and Management. We believe the most important factors in assessing governance include board oversight & direction, independence, experience and diversity, in addition to board and executive compensation policies and auditor recognition and tenure.

**Board oversight & direction:** Having a board oversight pertaining to environmental and social matters is extremely important when it comes to creating a sustainable environment and workplace. We believe that having a dedicated Board committee focused including ESG allows for oversight of the sustainability-related policies and risks and the ability to ensure appropriate corporate governance structures and systems are in place. Out of the companies we cover, almost every company has a Board committee, which encompasses ESG. For a breakdown of the company-specific Board committees see Appendix F.

Board independence and expertise: Independent directors essentially act as guides through an impartial and objective lens, offering different perspectives given their diversified skill set, experience and involvement in companies outside of the industry. Essentially, their role is to identify risks and opportunities that perhaps management would not naturally see, while improving corporate credibility and governance standards. As shown in the chart below (LHS), there has been a marked 7% increase in the average number of independent directors across our Pipelines & Midstream coverage universe. AltaGas recently announced the appointment of two female independents, which increased the percentage of independent directors on its board to 73%. We do note that our calculation is below the company's reported independent percentage given we categorize Founder and prior Chairman & CEO, Mr. Cornhill, as a non-independent. Similarly, we consider Keyera's co-Founder and prior CEO, Jim Bertram, as non-independent. Of note, investors view directors who have previously worked for long periods at the company in senior management roles or have been on the board for over 12 years as non-independents.

Additionally, we outline the average tenure of the Board, given the importance of fresh perspectives being incorporated in the strategic direction and overall decision-making process. Most of the companies within the Pipelines & Midstream sector fall within the band of five to 10 years, which we view as the sweet spot for tenure.



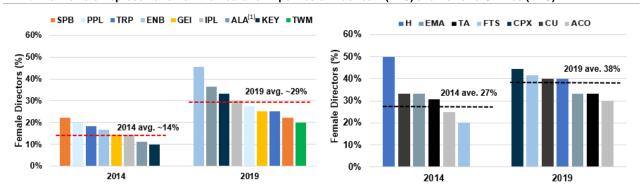


(1) AltaGas' numbers are from 2020, which includes the two new independent female directors (Linda Sullivan and Nancy Tower) who are set to be elected at the next annual shareholders meeting. Meanwhile, ALA's numbers do not include Daryl Gilbert because he is set to retire. Source: Company Documents, NBF

Board diversity: The new expectation across industry and the investment community is to see a Board comprised of at least 30% women. This progressive mandate not only addresses gender diversity in the boardroom but also ethical leadership via diversity, productivity and profitability. As shown on the following page, the Pipelines & Midstream group has significantly increased its percentage of female directors, essentially doubling its peer average of 14% in 2014 to 29% in 2019. However, when we compare the Pipelines & Midstream group to the Power & Utilities companies, we note that they are distinctly behind, with the Power & Utilities group average 38% female representation on the board in 2019 (was 27% in 2014). Looking at company-specific results, we highlight Enbridge for having 45% female representation on the board, while noting that AltaGas, Keyera and Inter Pipeline have all met or surpassed the 30% threshold. We anticipate more of the Midstream companies achieving at least 30% female board representation in the future.



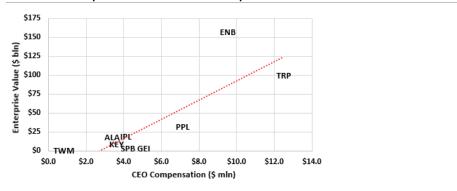
Exhibit 29: Female Representation on the Board for Pipelines & Midstream (LHS) and Power & Utilities (RHS)



(1) AltaGas' numbers are from 2020, which includes the two new independent female directors (Linda Sullivan and Nancy Tower) who are set to be elected at the next annual shareholders meeting. Meanwhile, ALA's numbers do not include Daryl Gilbert because he is set to retire. Source: Company Documents, NBF

**Board and Executive Compensation:** Compensation policies and plans that are competitive, equitable and transparent are important for incentivizing performance, aligning with the sustainable growth and long-term value creation objectives of stakeholders. Compensation committees responsible for reviewing and determining executive compensation typically rely on a comparator group made up of <u>similarly sized companies</u>. As such, we illustrate the companies in our Pipelines & Midstream coverage universe below, with Enbridge and TC Energy having the highest enterprise value and the highest CEO compensation.

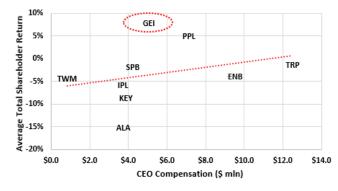
Exhibit 30: Enterprise Value versus CEO Compensation



Source: Company Documents, NBF

However, basing CEO compensation largely on enterprise value can present a moral hazard for stakeholders, in our view, as management could be incentivized to grow the business for the sake of growth, as opposed to creating stakeholder value on a per-share basis. As such, based on three-year average total returns ending 2018 relative to CEO compensation, GEI stands out as "best bang for your buck".

Exhibit 31: Total Three-year Shareholder return versus CEO Compensation



Source: Company Documents, NBF



EVP of Sustainability: With the growing importance of ESG disclosure and performance, we believe every company should have a dedicated executive management role for sustainability. A person that can explain the company's sustainability story and who understands the environmental and social risks facing the company in addition to governance policies. Quite simply, the EVP of Sustainability should be in charge of sustaining the company's social license to access capital markets. In our Pipelines & Midstream coverage universe, we note there are only two companies that have an executive sustainability position, Enbridge and TC Energy. TRP appointed Patrick Keys as the EVP, Stakeholder Relations and General Counsel and also assumed the role of Chief Sustainability Officer (CSO), while Enbridge appointed Roxanna Benoit as the VP, Public Affairs, Communications and Sustainability, Jennifer Varey as the Director, Corporate Social Responsibility (CSR) and Trevor McLeod, Director Indigenous and Climate Policy.

Financial Auditors: Third-party reputable auditors are crucial to helping ensure the integrity of financial information and the capital markets. Considering the companies in our coverage universe, all report annual financial results audited by reputable accounting firms (i.e., KPMG, Deloitte, PricewaterhouseCoopers (PwC), Ernst & Young (EY)). However, there is a growing focus from the investment community on how often a company rotates its auditor, with at least once every 10-12 years becoming the gold standard, per our discussions with investors. From a Governance perspective, it is increasingly important to implore mandatory audit rotation in order to avoid a conflict of interest related to long relationships (and growing fees) between the auditor and the client. We note that Superior Plus is the only company in the Pipelines & Midstream sector to rotate its auditors, switching from Deloitte to Ernst & Young (EY) in 2018. Although we award top marks from a Governance standpoint to those companies that implement a mandatory audit rotation program, we do give partial credit to those companies that undertake Request for Proposals (RFPs) every three to five years, vetting the choice to remain with the existing auditor (i.e., TC Energy, Pembina).

Exhibit 32: Total Three-year Shareholder return versus CEO Compensation

Company	2010	2011	2012	2013	2014	2015	2016	2017	2018	Turnover
Pipelines & Midtsream										
AltaGas	EY	0								
Enbridge	PWC	0								
Gibson Energy		PWC	0							
Inter Pipeline	EY	0								
Keyera	Deloitte	0								
Pembina	KPMG	<b>KPMG</b>	0							
Superior Plus	Deloitte	EY	1							
TC Energy	KPMG	0								
Tidewater Midstream						Deloitte	Deloitte	Deloitte	Deloitte	0
Pipelines & Midstream Turnove	r									0.11

Source: Company Documents, NBF

GHG Emissions Auditors: We are also seeing a trend towards third-party verification of a company's total GHG emissions, in order that investors can accurately assess and compare data across various companies and industries. Looking at our coverage universe, three companies (ALA, IPL, KEY) had their GHG emissions verified by a third party. AltaGas's Sustainability was supported by a third party with expertise in ESG reporting and materiality assessment, with third-party verification for 87% of its Scope 1 GHG emissions. IPL noted that both its financial statements and GHG emissions information within its Sustainability Report was subject to a third-party audit verification process. Lastly, Keyera reported that 72% of its direct (Scope 1) GHG emissions for its large final emitter facilities were verified by a third party. Moving forward, we would recommend all of our companies have both Direct (Scope 1) and Indirect (Scope 2) emissions verified by a credible third party.



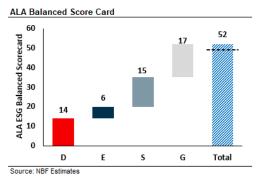
## Appendix A: ESG Assessment by Company

## AltaGas Ltd. (\$25 target; OP): Providing ESG transparency with inaugural ESG report...

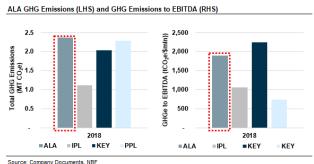
### ESG Balanced Score Card results:

• Disclosure, Environmental, Social, Governance: 52 / 100

*Overview:* On December 11<sup>th</sup>, ALA produced its inaugural ESG report, with the primary focus on providing transparency into ESG-related activities, with the goal of evolving its report to include goals and targets in the future. We view the report as a significant step for ALA and believe the company will score higher in the coming years once it incorporates WGL Holdings, provides more than one year of data, and establishes and discloses specific and achievable targets.

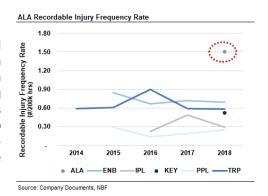


Within ALA's ESG report, the company provided a segmented breakdown of its GHG emissions, showing both direct (Scope 1) and indirect (Scope 2) emissions, while also providing methane and nitrous oxide emissions. Given the company only provided one year of data, when we rank the company based on its 2018 GHG emission



relative to its midstream peers, ALA ranks the highest on total GHG emissions and the second highest on GHG emissions relative to EBITDA. We do note that once the company incorporates WGL Holdings, we will transition ALA to being ranked against its Utility peers, given that over 50% of the EBITDA stems from its Utility segment. Overall ALA scored 6/25 on Environmental, largely reflecting limited or no information related to GHG emissions intensity reductions, waste and water management, and pipeline releases.

ALA scored 15/25 within the Social category, reflecting limited disclosure in terms of employee retention rates and system reliability. We do note that each of the utilities within WGL has a specific pipeline replacement program that has been approved by the regulators. We highlight AltaGas for exemplifying strong Indigenous engagement through the company's Indigenous Development Fund, which provides early-stage capital to Indigenous entrepreneurs in Alberta. We would recommend the company focus more on employee safety, given that ALA had the highest recordable injury frequency rate out of its peers.



On Governance, ALA scored 17/25, below the peer group average predominantly as a result of having the lowest number of independent board members (ALA: 73%, Average: 85%). However, we do give the company credit on the diversity front for recently adding two additional women to its



**Valuation:** Our target price for ALA is \$25, which is based on a risk-adjusted dividend yield of 4.5% applied to our 2021e dividend of \$0.96/sh, a 14.5x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$26.75. We maintain our Outperform rating.

Board, bringing its female representation up to 36%.

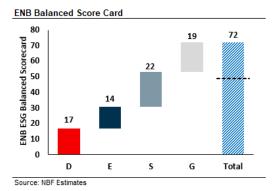


## Enbridge Inc. (\$62 target; OP): An ESG industry leader...

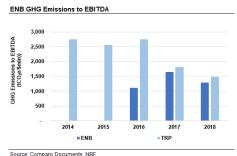
#### ESG Balanced Score Card results:

• Disclosure, Environmental, Social, Governance: 72/100

Overview: Enbridge is an ESG industry leader when it comes to both disclosure and practice. ENB began reporting on sustainability efforts in 2001 while issuing its first solo Sustainability report in 2018, based on GRI and SASB reporting. Meanwhile, the company also recently produced a specific climate strategy report based on TCFD reporting, in addition to a paper discussing Indigenous Rights and Relationships. Given ENB's strong disclosure, safety practices, combined with a strong focus on pipeline integrity, we recommend ENB as a core holding within environmentally-conscious portfolios.

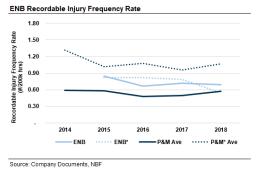


ENB scored second highest on the Environmental section with 14/25, largely reflecting the company's dedication to pipeline safety and integrity, in addition to having strong programs in place for water and waste



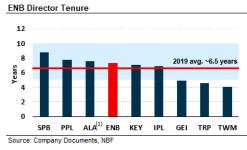
management, land reclamation and biodiversity. We also note the complete transparency of the ENB pertaining to GHG emissions and intensities by segment, illustrating the company's commitment to tracking all of its air emissions (including  $\text{CH}_4$  and  $\text{NO}_x$ ). Although ENB has experienced an increase in absolute GHG emissions and in GHG intensities, we note that on an EBITDA basis, the company has seen a reduction. Looking ahead, we anticipate that ENB will establish concise targets related to reducing its GHG emissions and a clear plan to achieve those goals, and therefore will further stand out as an Environmental leader.

On the social aspect, ENB scored the highest at 22/25 given the company's focus on employee diversity and safety, with ENB having the lowest spread between employee and contractor injury frequency rates in our coverage universe (ENB: 0.69<sub>(e)</sub>, 0.55<sub>(c)</sub> vs. peer average: 0.58<sub>(e)</sub>, 1.07<sub>(c)</sub>). As well, ENB scored well in system reliability and cybersecurity, which it believes is a top risk to critical infrastructure and has therefore established the position of Chief Information Security Officer to address cybersecurity. Room for improvement includes establishing Indigenous joint ventures and disclosing the percentage of minori



Indigenous joint ventures and disclosing the percentage of minority and long-term disability employees.

With 82% independent board membership, 45% female representation and an average tenure of ~7.5 years, Enbridge scored 19/25 in the Governance section. ENB has demonstrated a strong focus on ESG through establishing a Corporate Social Responsibility (CSR) committee on the Board to provide oversight of ENB's



sustainability policies, strategies and performance. Elsewhere, ENB appointed Roxanna Benoit, Jennifer Varey and Trevor McLeod as key ESG executives.

*Valuation:* Our target price for Enbridge is \$62, which is based on a risk-adjusted dividend yield of 6.0% applied to our 2021e dividend of \$3.56/sh, a 15.0x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$62.00. Combined with a 12-month total return opportunity of 21.8% (total group: 15.1%), we maintain our Outperform rating.



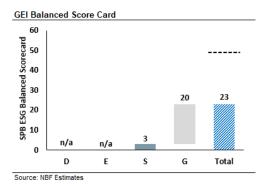
## Gibson Energy Inc. (\$30 target; SP): Highest three-year average total return...

#### ESG Balanced Score Card results:

Disclosure, Environmental, Social, Governance: 23 / 100

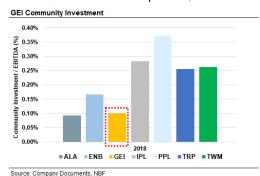
*Overview:* Although GEI has not yet published a Sustainability report, we anticipate the company providing one by year end. As such, our scorecard reflects only the Governance evaluation. We will adjust our scorecard accordingly for disclosure, environment and social practices once a report has been produced.

At this time, we have not provided GEI with a ranking for Environmental; however, we do highlight in our Innovation & Technology Initiative section the company's 50/50 joint venture



diluent recovery unit (DRU). Recall, this facility is the first of its kind in Canada and will recover diluent from a ~25/75 diluent/bitumen blend feedstock (DilBit) and is expected to be in service in Q2/21. For more information see Appendix D.

On the Social component, Gibson scored 3/25 given that the company only disclosed the total amount of



community investment in 2018. As shown in the chart to the left, Gibson had one of the lowest amounts of community invested relative to EBITDA - metric we expect will increase going forward now that the balance sheet issues are behind the company. Meanwhile, we anticipate the company quantifying other social metrics in the future.

GEI scored 20/25 in Governance, standing out as the "best bang for your buck" based on three-year average total returns ending 2018. We also note that the company has 88% Board independents, 25% females on the Board, with an average Director tenure of ~4.9.



Valuation: Our target price for Gibson is \$30, which is based on a risk-adjusted dividend yield of 5.0% applied to our 2021e dividend of \$1.46, a 14.5x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$29.75. We maintain our Sector Perform rating.





Source: Company Documents, NBI

## Inter Pipeline Ltd. (\$24 target; SP): Top score for Environmental...

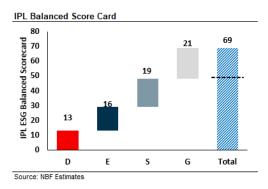
#### ESG Balanced Score Card results:

• Disclosure, Environmental, Social, Governance: 69 / 100

*Overview:* When looking at just the midstream companies, Inter Pipeline scored the highest out of its peers. The company recently produced its second biennial Sustainability report, which included a two-page summary statistics chart with multiple years of data, based on SASB, GRI and TCFD and with its GHG emissions third-party verified. We anticipate the company becoming an ESG leader once it incorporates targets into its reports.

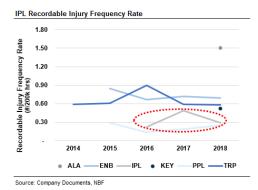
Within the Environmental category, IPL posted the best Source: NBF Estimates

score overall, with 16/25, largely reflecting the company having the lowest amount of absolute GHG emissions relative to its midstream peer group (IPL: 1.1 MtCO<sub>2</sub>e, Peer: 2.0

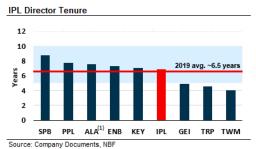


 $MtCO_2e$ ). Although we left the absolute GHG emissions in the report as just IPL's Canadain business (as per reported), when we add in the Bulk Liquid Storage GHG emissions (as provided in the CDP disclosure), Inter Pipeline still remains the lowest GHG emitter overall. Meanwhile, we also highlight the company for disclosing the number and amount of liquid hydrocarbon spills it had on an annual basis, with the number decreasing in 2018. In the future, we would recommend the company outline a clear GHG emissions and intensity reduction plan with specific targets.

On the Social aspect, Inter Pipeline scored 19/25 as a result of reporting strong employee physical safety and mental health. We believe the company sets the gold standard when it comes to mental health via breaking down barriers in the workplace surrounding mental health through in-house training for The Working Mind for all employees and managers and offering \$10,000 annually per employee and their eligible dependents for psychological counselling as part of the company's health benefits. IPL also has exemplified strong community investment and Indigenous engagement, with its joint venture business with the Fort McKay First Nations group for vehicle leasing and maintenance.



IPL scored 21/25 on Governance with 30% female representation on its Board, and 90% of its Directors being independents with an average of ~6.9 years for tenure. Looking at CEO and Director compensation, IPL was one of the lowest of the group; however, we do note that there was no mention of compensation being tied



to Sustainability performance for executives. We believe this is something that the company will report moving forward. Altogether, IPL scored highest on Governance as well.

*Valuation:* Our target price for IPL is \$24, which is based on a risk-adjusted dividend yield of 7.5% applied to our 2021e dividend of \$1.71/sh, a 16.5x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$25.50. We reiterate our Sector Perform rating.

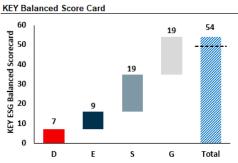


## Keyera Corp. (\$42 target; OP): Lowest turnover rates amongst its peers...

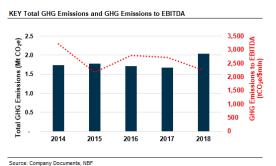
#### ESG Balanced Score Card results:

• Disclosure, Environmental, Social, Governance: 54 / 100

Overview: Although Keyera has yet to launch its inaugural Sustainability report, the company has provided a two-page data sheet with key ESG performance metrics, which we believe is the company's first step in being transparent about its sustainability practices. Given the limited disclosure at this time, we do anticipate KEY's score to increase substantially once it publishes its first fulsome report with more qualitative data.

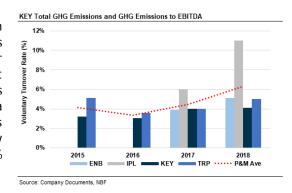


On an absolute GHG emissions basis, Keyera had the source: NBF Estimates second-lowest amount amongst its midstream peer group with 2.0 Mt CO<sub>2</sub>e per year (peer average: 2.0 Mt CO<sub>2</sub>e per year). We do note that the company has held its absolute GHG emissions relatively flat over the past five

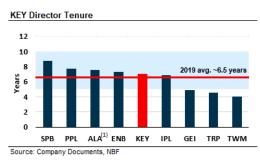


years despite significantly growing the business, as such the company's GHGe/EBITDA has come down since 2014. Considering GHG emissions intensities, KEY broke out its AEF facility vs. its other business. We anticipate seeing a reduction moving forward as the company brings on its KAPs pipeline, which is a lower emissions intensity project. We commend the company for reporting a breakdown of methane, nitrogen oxide and sulfur dioxide emissions in addition to the amount of waste disposed and recycled and the amount of water that has been withdrawn and recycled/reused. Overall, Keyera scored 9/25 on the Environmental category, primarily related to disclosure.

Keyera scored 19/25 within the Social category with the lowest voluntary turnover rate over the past four years amongst its peers, with a four-year average of 3.6% (peer average: 4.6%). Elsewhere, the company had the highest number of volunteer hours per employee at 7.9, which was nearly double the peer average at 3.9. Additionally, Keyera has demonstrated a strong community and Indigenous engagement process. However, we do note that the company had the lowest amount of females in the workforce at 24.2% in 2018 relative to its peers at an average of 28.2%.



With respect to Governance, Keyera scored 19/25, reflecting an average board tenure of ~7 years, with over 30% female representation, but having only 78% independents on the Board given that we consider Keyera's co-Founder and prior CEO, Jim Bertram, as non-independent. Considering CEO compensation relative to both



enterprise value and the three-year average total return, Keyera ranks in the middle of the group. Meanwhile, we note that the company did report that 72% of its direct (Scope 1) GHG emissions were verified by a third party.

*Valuation:* Our \$42 target price for Keyera is based on a risk-adjusted dividend yield of 4.75% applied to our 2021e dividend of \$2.04/sh, a 14.5x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$42.50. Combined with a 12-month total return of 27.5% (peer group: 21.8%), we reiterate our Outperform rating.

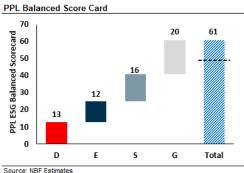


## Pembina Pipeline Corp. (\$62 target; OP): Setting the bar on safety

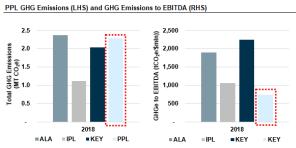
#### ESG Balanced Score Card results:

• Disclosure, Environmental, Social, Governance: 61 / 100

*Overview:* Pembina scored relatively even across each of the four categories, with the strongest being in Governance. The company did an excellent job of showing multi-year quantitative data in its Sustainability report, informed by SASB, GRI and TCFD. Pembina also has a strong Sustainability interface on its website, showing specific data related to each of the ESG categories. We would recommend PPL include targets and specific performance related to targets in the company's next Sustainability report.



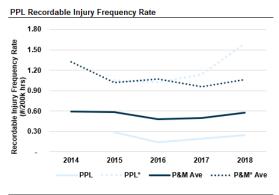
Pembina scored 12/25 within the Environmental section, coming in near the middle of its peers. Looking at the company's absolute GHG emissions, PPL had the second highest out of its midstream peers but came in significantly lower than its larger pipeline peers (ENB, TRP).



Source: Company Documents, NBF

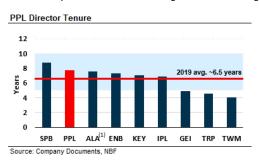
Meanwhile, when we shift our focus to absolute emissions relative to EBITDA, Pembina had the lowest ratio. We do note that PPL did not include the Veresen Midstream assets in its GHG emissions calculation; therefore, we anticipate the company's GHG emissions and intensity to move up once it is reported. Elsewhere, Pembina had the lowest volume of hydrocarbon spills out of all the companies that reported. Looking at the Environmental impacts on the land, we would like to see Pembina report on waste and water consumption/recycled in the future.

On the Social aspect, Pembina scored 16/25. The company had the lowest employee Recordable Injury Frequency Rate over the past four years, averaging 0.20 per 200,000 hours (peers: 0.53), and the lowest employee Motor Vehicle Incident (MVI) frequency, averaging 0.85 mln per 1 mln km (peers: 1.32). However, when looking at the company's contractor rates for RIFR and MVI, PPL had the highest. We would recommend Pembina looking at its safety policy for contractors and suppliers moving forward. Elsewhere, we would recommend the company reporting the number of females in senior management and turnover rates.



Source: Company Documents, NBF

Pembina scored 20/25 in the Governance section as a result of 91% Board independents but only 27% female representation coming in below the gold standard 30%. Meanwhile, the company had an average Director



tenure of  $\sim$ 7.8 years, well within the band of five to 10 years which we consider sufficient. Elsewhere, we highlight PPL for being our second place when it comes to CEO compensation relative to three-year return.

**Valuation:** Our target price for Pembina is \$62, which is based on a risk-adjusted dividend yield of 4.50% applied to our 2021e dividend of \$2.67/sh, a 14.5x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$64.00. We reiterate our Outperform rating.

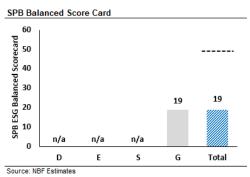


## Superior Plus Corp. (\$13 target; SP): Expecting inaugural Sustainability report by year end

#### ESG Balanced Score Card results:

• Disclosure, Environmental, Social, Governance: 19 / 100

*Overview:* Superior Plus has also yet to publish a Sustainability report; however, SPB has provided a minimal amount of qualitative disclosure in its most recent 2018 Annual Information Form (AIF). At this time, our scorecard reflects only a Governance evaluation due to the company only providing modest qualitative data regarding Environmental and Social in its Annual Information Form. We will adjust SPB's score once a Sustainability report has been produced.



Within the 2018 AIF, Superior Plus outlined that ~12% of its transportation fleet currently runs on a dual-fuel system, which has led to a reduction in GHG emissions by 11% per vehicle. Meanwhile, SPB also stated that it has begun to incorporate SMART Tank sensors into its propane tanks, which saves an average of one delivery per tank per year, leading to a reduction in GHG emissions. Considering the company's initiatives regarding waste management, Superior now uses retread tires for ~50% of its tire replacements.

Overall, the company noted that it has reduced its recordable injuries across its Specialty Chemicals division by 50%, while its Energy Distribution business has reduced its motor vehicle accidents by 20% compared with 2017. Elsewhere, SPB established a strategy in 2014 to increase its female representation in senior management because the company really values having a diverse leadership team. As a result, nearly ~23% of new hires have been females.

When it comes to the Governance section, Superior Plus scored 19/25. The company has 89% Board independents with an average tenure of ~8.8 years; however, SPB had the second-lowest number of females on



the board relative to its peers, with only 22% female representation (peers: 29%). Elsewhere, we highlight Superior for being the only company to rotate its auditors in the past eight years, switching from Deloitte to Ernst & Young in 2018.

*Valuation:* Our target price for Superior Plus is \$13, which is based on a risk-adjusted dividend yield of 5.5% applied to our 2021e dividend of \$0.72, a 10.5x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$12.75. We maintain our Sector Perform rating.

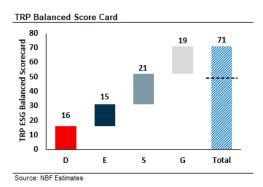


## TC Energy Corp. (\$75 target; SP): ESG Scorecard Runner-Up...

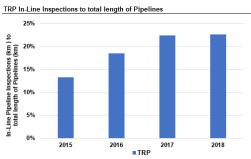
#### ESG Balanced Score Card results:

• Disclosure, Environmental, Social, Governance: 71 / 100

Overview: When it comes to ESG reporting, TC Energy has been producing Corporate Responsibility reports since 2001, with its first official Sustainability and Climate Change report in 2019. The report was informed by SASB, GRI and TCFD. We highlighted the company for providing an ESG Data Sheet, which is extremely extensive with a number of GRI Initiatives outlined. Overall, TC Energy ranked the second highest in the Pipelines & Midstream group. We would recommend the company reporting specific and measurable targets and a road map to achieving those goals.



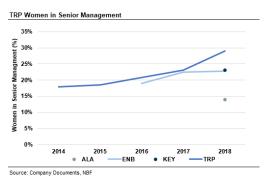
On the Environmental section, TC Energy scored 15/25 coming in near the top of its peer group. Comparing the company only against Enbridge, TC Energy has reported lower absolute GHG emissions, primarily a product of having more natural gas pipelines. On an emissions intensity basis, TRP has experienced some



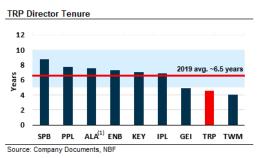
Source: Company Documents, NBF

fluctuation in its natural gas direct intensities; however, looking at its Power emissions intensity the company has seen a significant decrease over the past three years. We do note that when comparing TRP's Power intensities against the Power companies (CPX, TA, EMA, FTS), TRP has averaged 0.15 tCO $_2$ e/MWh over the past year vs. the peer average of 0.57 tCO $_2$ e/MWh. Meanwhile, when we look at hydrocarbon spills, TRP has had the largest amount of volumes and the highest amount of spills per km of liquid pipeline. We still contend that on liquids safely transported basis vs. liquid spills, TC Energy has a solid safety track record of 99.99%.

TC Energy scored 21/25 on the Social component. TRP has done an excellent job with its community investment and its indigenous engagement programs. We specifically highlight the company working with Indigenous groups to potentially purchase a 10% stake in the Coastal Gaslink pipeline. Elsewhere, we note that TRP has held a consistent voluntary turnover rate below 5% over the past five years while having the highest number of females in senior management amongst its peers.



Considering the company's governance practices, TC Energy scored 19/25 with the highest amount of Board independents (92%) and an average tenure of ~4.6 years. We do note that TRP only has 25% female representation on its board currently; however, the company has stated a 30% target to be reached by the end



of 2020. Meanwhile, the company posted the highest CEO compensation out of all its peers, which reflects TC Energy's total enterprise value, while the company had a three-year average shareholder return of -2% (peers: -3%).

*Valuation:* Our target price for TC Energy is \$75, which is based on a risk-adjusted dividend yield of 4.75% applied to our 2021e dividend of \$3.63/sh, a 14.75x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$74.50. We reiterate our Sector Perform rating.



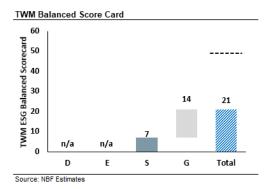
## Tidewater (\$1.75 target; OP): Solid display of Community Investment

#### ESG Balanced Score Card results:

• Disclosure, Environmental, Social, Governance: 21 / 100

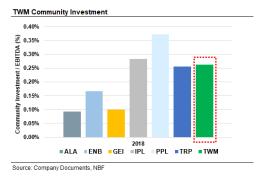
*Overview:* Tidewater is another company that has not yet published a Sustainability report and as a result, our scorecard reflects primarily TWM's governance practices, in addition to its community investment and Indigenous engagement within the Social category. We will adjust our scorecard accordingly when more disclosure has been provided.

Although we could not rate TWM on the Environmental category, we do note that the company is helping the Alberta Power companies reduce their GHG emissions by helping build and



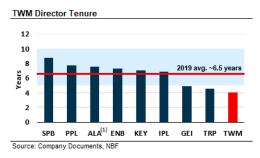
operate the Pioneer Pipeline. The pipeline distributes clean natural gas to TransAlta's (TSX: TA, T: \$11, R: SP) legacy coal fed Sundance and Keephills generating stations, allowing TA to reduce its carbon emissions by ~30%.

The company reported total community investment spent in 2018 within its most recent corporate presentation, which allowed us to provide a score within the Social component. As shown in the graph to the left, the company was in the top three for community investment spend relative to EBITDA. Elsewhere, we note the company's Indigenous engagement. Overall Tidewater scored 7/25 of the Social component.



TWM scored 14/25 in Governance, with 80% independent

Directors on the board and average tenure of ~4 years. Meanwhile, the company scored the lowest on female representation on the board relative to its peers, with only 20% female representation (peers 29%).



Our target price for Tidewater is \$1.75, which is based on a risk-adjusted dividend yield of 2.50% applied to our 2021e dividend of \$0.04, a 9.0x multiple of our 2021e Free-EBITDA and our DCF/sh valuation of \$1.75.



## Appendix B: Biodiversity & Land Reclamation by Company (Environmental)

### **Biodiversity**

<u>AltaGas:</u> conducts environmental impact assessments before starting construction, with the goal of understanding the project's potential effects. An example of this would be when the company collectively engaged with the Marquette Area Public Schools and the Superior Watershed Partnership in planting native wildflowers on a pipeline right-of-way after the area was reclaimed.

<u>Enbridge:</u> reported that during its 356-mile NEXUS gas transmission pipeline project, the company avoided direct impacts to bat and migratory birds and also created the Migratory Bird Conservative Plan (MBCP) that focused on bird conservation and state breeding habitats.

<u>Keyera:</u> conducts thorough biodiversity assessments, which includes identifying nearby protected, environmentally-sensitive areas; reviewing threatened and endangered species; engaging with local residents, landowners and indigenous communities about the land; and hiring local experts to conduct biodiversity survey. Specifically, the company uses a Mitigation Hierarchy, which allows the company to understand where projects could disturb a sensitive area and potentially avoid or attempt to re-route.

<u>Pembina:</u> highlighted its 27 km Pouce Coupe Lateral Project, where the company implemented a field monitoring initiative to better identify and track local wildlife and the use of the mineral licks (an essential source of nutrients to local mammals), while specifically working with the Kelly Lake Cree Nation and Horse Lake First Nation to monitor the wildlife.

<u>TC Energy:</u> provided a case study on its snake initiative, which ensured that no harm was done to snakes while completing the recent pipeline maintenance project on the prairies in southeastern Alberta, with the company hiring a professional snake wrangler to ensure the reptiles were handled safely and with least disturbance as possible. Every day, the snake wrangler would do a sweep of the dig area in the morning before any heavy equipment drove on site and would gently relocate the snakes if required.

#### Land Reclamation

<u>AltaGas:</u> has implemented boring techniques along its pipeline routes, which is a less invasive method relative to trenching in order to minimize and mitigate its impacts on the land. Additionally, the company mitigates its impact through pipeline route optimization during conceptual engineering.

<u>Enbridge:</u> has created a full Environmental Protection Program (EPP) in order to fully integrate environmental considerations into its business decisions with the goal of anticipating, preventing, managing and mitigating environmental risks and conditions that could adversely affect the environment.

<u>Inter Pipeline:</u> has begun exploring the novel reclamation technique referred to as cone mulching to restore vegetation following construction activities. Elsewhere, IPL has applied four different remediation approaches in the McNeil area of Alberta, which included onsite ex-situ treatment, in-situ chemical oxidation, in-situ soil vapor extraction and air sparging, resulting in reduced waste to landfill and reduced environmental footprint.

<u>Keyera</u>: completes a biodiversity sweep before starting construction on any projects, including wildlife corridors, critical wildlife or fish habitat, nesting areas, wetlands and rare sensitive plants. In addition, the company conducts reclamation efforts during construction, operation and facility end of life in order to minimize its impacts on the environment.

<u>Pembina</u>: conducts environmental studies in addition to hazard and risk assessments to understand the potential effects that the company's operations have on the environment. The company has also installed groundwater monitoring wells to monitor early indications of potential soil/groundwater impact.

<u>TC Energy</u>: has a policy of completing environmental impact assessments for its projects, which has included field studies to examine existing natural resources and land use along its proposed project footprint. TRP also looks to collaborate with stakeholders and Indigenous communities to identify and consider environmental protection plans. An example would be when TRP built the Topolobampo Pipeline in Mexico, TC energy hired local professional biologists, ecologists and botanists to identify/relocate plants along the right-of-way.



## Appendix C: Water & Waste Management by Company (Environmental)

## Water Management

<u>AltaGas:</u> is conscious of its water usage, ensuring that when the company does use water it protects the environment through all stages of sourcing, treatment and disposal. An example of the company's work to minimize its water impact would be when its utility SEMCO created over 10 acres of wetland to ensure that the Escanaba River watershed was not negatively impacted by the construction of the Marquette Connector pipeline.

<u>Enbridge:</u> has displayed strong awareness, with specific programs in place to monitor wetland and watercourse crossings regularly, while during the construction of a pipeline, working with landowners and the Canadian Association of Energy and Pipeline Landowner Association (CAEPLA) to ensure vital access to water for irrigation of crops.

<u>Inter Pipeline:</u> understands the importance of minimizing its water consumption and recycling water wherever possible. The company monitors water used during construction projects and looks to recycle water safely back into a natural environment when applicable. Specifically, IPL recycled 2.6 million cubic metres of water at its Cochrane Extraction Plant and returned 270,000 cubic metres of water back to the environment during the construction of its Heartland Petrochemical Complex in 2018. The company also supports the CEPA Integrity First initiative for water protection.

<u>Pembina:</u> underwent a detailed audit and review of its approach to water management as part of the CEPA Integrity First Program.

<u>TC Energy:</u> has exemplified a strong belief in the protection of water through its partnership with Trout Unlimited Canada, which has the goal of connecting waterways across Canada by repairing riverbeds, linking fish to their habitat and improving water quality.

### Waste Management

<u>Inter Pipeline:</u> firm commitment to what it calls the 'circular economy' by seeking opportunities to reduce waste and repurpose waste material through reuse and recycling in both construction and its operations. Specifically, the company noted that it decreased its fluid waste from 2017 to 2018 through the use of hydrovac operations, which represents 56% of the company's fluid waste. Additionally, we note Inter Pipeline's partnership with a company that recycles fire-retardant coveralls that are used for field operations, contractors and visitors at operations sites. The company that Inter Pipeline has partnered with breaks down the threads of the fire-retardant coveralls and then re-weaves the material into new coveralls, which has material that often outperforms the testing standards of regular new coveralls.

<u>TC Energy:</u> introduced a new training program in 2017, equipping its first responder employees with the skills and knowledge to respond to and manage a hazardous substance instance.



## Appendix D: Innovative & Leading-edge Technologies (Environmental)

<u>AltaGas</u>: is actively working on new and advanced technology regarding process safety and integrity management. AltaGas incorporates multiple technologies with respect to detecting methane leakage and venting sources from its operations. Specifically, the company is working with acoustic detection technology, which uses sound that is inaudible to the human ear in order to detect very small leaks.

<u>Enbridge:</u> has always believed in investing in continuous innovation and research & development (R&D) when it comes to enhancing the safety and reliability of the company's systems. In 2019, ENB launched two new Technology & Innovation Labs - one in Calgary and one in Houston - with the goal of accelerating technology-driven business solutions. These two labs are designed for employees to think outside the box and to look at problems from a different lens in order to find solutions that allow the company to become more efficient. Elsewhere, the company has secured a number of renewable natural gas (RNG) development projects, including the Dufferin project within the City of Toronto, to utilize more renewable natural gas within its utility segment. Recall, RNG is produced from the decomposition of organic waste. Lastly, the company has partnered with Hydrogenics to develop North America's first utility-scale Power-to-gas facility, in order to store surplus electricity within the current pipeline system. In addition, Enbridge has been active in adding a relatively small amount (-2%) of hydrogen to the natural gas stream in order to reduce total GHG emissions, with the potential to achieve 10%.

<u>Gibson:</u> alongside its 50/50 joint venture partner USD Partners LP (NYSE: USDP, Not rated), announced an agreement to construct a diluent recovery unit (DRU) near Hardisty, Alberta, underpinned by a 50 mbpd long-term take-or-pay contract with ConocoPhillips (NYSE: COP, Not rated). The DRU will recover diluent from a ~25/75 diluent/bitumen blend feedstock (DilBit), which will then be utilized by shippers sending ~30/70 DilBit blend down export pipelines while producing a "neat bitumen" blend (DRUbit: ~95% bitumen) to be shipped via the Hardisty Unit Train Facility to the U.S. Gulf Coast (online Q2/21). This will be the first DRU of its kind in Canada.

<u>Inter Pipeline:</u> recently announced a \$10 mln investment with the Northern Alberta Institute of Technology (NAIT) over the span of 10 years to create a research department that is tasked with facilitating the reuse and recycle of plastics in Canada, which stems from the company's PDH/PP project. The company believes in responsible plastic use and therefore it is examining opportunities for plastics to be re-used, retaining the value of products and resources for as long as possible.

<u>Pembina:</u> With the company's pipelines and facilities being monitored 24 hours a day, 7 days a week from its new control centre in Sherwood Park, the company uses some of the most advanced technology when it comes to detecting irregularities, leaks and damages. Pembina has specifically dedicated a significant part of its annual investment budget to facility integrity activities. Elsewhere, the company has established a Fleet Task Force to focus on reviewing and enhancing the fleet vehicles policy, with the goal of implementing new telematics technology within its driver and vehicle programs in order to provide real-time data to further improve its operations.

<u>TC Energy:</u> has one of the industry's largest research and development (R&D) programs, dedicating around ~\$150 mln towards technology development since 2013. TRP conducts internal research programs and also participates in joint ventures, while also collaborating with industry associations, peers, academics, governments and non-government organizations to enhance the safety, efficiency and reliability of its pipeline operations. In 2017, TRP launched a project with the Government of Alberta and a few other peers to pilot a new pipeline monitoring technology on its Keystone pipeline, which involved using a fiber optic cable installed along the pipeline to act as a microphone and strain gauge to detect various events and potential leaks. Elsewhere, in 2018, TC Energy invested ~US\$25 mln in Energy Impact Partners, which is a collaborative strategic investment firm that invests in innovative technologies, service and products throughout the electricity supply chain.



## Appendix E: Cybersecurity & Indigenous Engagement (Social)

## Cybersecurity

<u>AltaGas:</u> has a cybersecurity program that falls under the direction of the Audit Committee and is designed to reduce risk and ensure the protection and availability of critical data and systems, in order to ensure the company's systems are running smoothly and efficiently. Of note, ALA provides regular training to employees based on cybersecurity while the company follows the National Institute of Standards and Technology (NIST) framework for information security.

<u>Enbridge:</u> recognizes that cybersecurity is a top risk to critical infrastructure and therefore includes it under its sustainability-related risks. ENB also has assigned a dedicated Chief Information Security Officer who is in charge of cybersecurity and has increased its cybersecurity awareness by having increased training and enhanced antiphishing and anti-malware controls within the company. Meanwhile, Enbridge also utilizes a centralized Technology and Information Services (TIS) function across its business, which allows the company to have full line of sight to every system and the ability to mandate technology policies across the whole business.

<u>Keyera:</u> understands that cybersecurity risk is very serious. Over the past several years, the company has increased its dedicated internal resourcing as well as its internal education efforts to identify, communicate and continue to understand and anticipate cybersecurity risk. KEY has a dedicated IT staff focused on cybersecurity, as well as additional resources within the organization focused on other areas and networks of key importance and risk. The company uses multi-layer modern defenses, including multi-factor authentication, while also providing cybersecurity training to all staff, including targeted phishing exercises each year. Furthermore, KEY also completes third-party testing on cybersecurity and perimeter hardness on an annual basis.

<u>TC Energy:</u> has a robust cybersecurity program with mandatory training, and a cybersecurity policy and standards. Ongoing cybersecurity tests and drills are administered company-wide, and results are regularly reported to company leadership. Cybersecurity risk has been at the forefront of TC Energy's mind, being a discrete topic presented to the Board during 2018 and 2019.

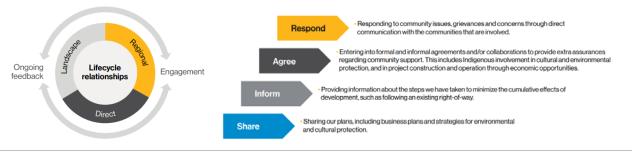
#### Indigenous Engagement

<u>AltaGas:</u> has worked closely with Indigenous partners in Canada with an overarching principle of a willingness to integrate indigenous teachings and knowledge to help inform planning and development in addition to formalizing innovative Partnering Agreements that deliver value to Indigenous communities. A specific example would be during the construction of the propane export terminal at Prince Rupert; ALA worked in consultation and close collaboration with the Tsimshian Nation while the company also developed an Operator Training Program geared to Indigenous Peoples with SAIT and Coast Mountain College. Furthermore, AltaGas has established the Indigenous Development Fund with the Indian Business Corporation (IBC) to provide early-stage capital to Indigenous entrepreneurs in Alberta, with the company providing an initial \$500,000 interest-free loan to IBC. Of note, in 2018, \$100,000 was provided to three Indigenous companies through the fund.

Enbridge: has established a specific Indigenous Engagement Process and Indigenous Lifecycle Engagement Framework (both shown below), which involves building lifecycle relationships through engagement and ongoing feedback. In addition, the company also has an Indigenous Peoples Policy, which includes understanding and educating the company about Indigenous history, traditions and culture. ENB recently released a separate discussion paper, Indigenous Rights and Relationships in North American Energy Infrastructure, to better articulate the company's policies and procedures of building relationships and collaborating with different Indigenous and Aboriginal groups. Meanwhile, Enbridge specifically outlined that its Line 3 Replacement project has been the company's largest capital project in addition to representing the company's largest community and Indigenous engagement effort to date. By the end of 2018, ENB recorded ~26,700 engagements (meetings, phone calls, emails and open houses) with landowners, municipalities, Indigenous communities or groups in the United States. In Canada, as of May 2019, ENB had 58 agreements with 95 Indigenous communities which included \$30 mln of capacity funding. Overall, the Line 3 Replacement project provided over \$400 mln of contracts to Indigenous businesses or partners, with more than 1,100 Indigenous people hired.



Exhibit 33: ENB Indigenous Lifecycle Engagement Framework



Source: Company documents

<u>Inter Pipeline:</u> has a thorough and collaborative process when it comes to building relationships with Indigenous groups, which involves conducting face-to-face meetings, implementing community outreach and providing funding to Indigenous communities through consultation and relationship agreements and individual requests from Indigenous communities. A specific example of this was when IPL entered into a business relationship with Fort McKay First Nations joint venture, Rising Sun Services, for the company's vehicle leasing and maintenance. Starting in November 2018, all of the company's new vehicle leases are under a long-term agreement with Rising Sun Services, which represents approximately 10% of the company's fleet. Meanwhile, IPL has announced a plan to eventually transition all vehicle leases over to Rising Sun Services.

<u>Keyera:</u> believes in contributing to Indigenous communities' growth and capacity by supporting training, employment, business development and community investment opportunities. The company also uses an Indigenous Business Involvement (IBI) process to determine how local First Nations or Metis communities can contribute to Keyera's different operations and projects, which involves (1) formal consultation; (2) identification of potential business involvement opportunities; and (3) exploration of community investment opportunities.

<u>Pembina:</u> Pembina provided a detailed approach to Indigenous relations in its Sustainability report surrounding consultation, workforce development, community relations and investment, and awareness. The company has established a track record of offering training, contracting and joint programs in order to promote participation in economic opportunities. Of note, the company helped the Aseniwuche Winewak Nation (AWN) to purchase solar panels for three community buildings, which helped unlock a provincial grant from the Alberta Indigenous Solar Program. Pembina also provided training for eight community members in order to better understand how to set up solar panels. The company anticipates that the solar panels will save AWN more than \$90,000 in electricity costs per year, while also helping to reduce GHG emissions.

<u>TC Energy:</u> At the forefront of TRP's Indigenous engagement philosophy is an Indigenous relations policy that was established to ensure that the company's personnel pursue and develop long-term mutually beneficial relationships with Indigenous groups in Canada, the United States and Mexico. Additionally, TC Energy has an Indigenous Relations Commitment Statement, which sets out that personnel must ensure meaningful and respectful engagement and dialogue through the use of principled, transparent and adequate approaches. Regarding new construction projects, TRP seeks to involve Indigenous groups in all aspects of project development including capacity building, contracting and employment opportunities as well as project participation. A specific example of this would be the Coastal GasLink, where the company secured agreements with all 20 elected First Nations along the project route, who are also actively participating and benefit from employment and contracting opportunities. We note TC Energy chose ATCO Ltd. (TSX: ACO.X, T: \$52, R: SP) and the Haisla Nation to provide workforce housing and operational support services for three camps in relation to the construction of the Coastal GasLink Pipeline. Coastal GasLink and TC Energy have also spent over \$8.5 mln in community investments and sponsorships in northern B.C. supporting local and Indigenous communities along the route. Even further, TC Energy is currently working with Indigenous groups to potentially purchase a 10% stake in Coastal GasLink.



## Appendix F: Board Oversight & Direction (Governance)

<u>AltaGas:</u> has an Environment, Health and Safety Committee which overseas environment, health and safety policy, compliance and risk. The company also has a Governance Committee that oversees stakeholder relations (including with our Indigenous partners), community investment, government relations and succession planning for the Board.

<u>Enbridge:</u> has established a Corporate Social Responsibility (CSR) Committee, which is responsible for providing oversight of ENB's policies, strategies and performance related to CSR and sustainability, including indigenous and stakeholder engagement, climate change, public policy, government relations and CSR reporting.

<u>Gibson:</u> has an Environmental, Health and Safety Committee which reviews the status and effectiveness of the company's environmental, health and safety performance.

<u>Inter Pipeline:</u> has an Environment, Health and Safety (EH&S) Committee, which is responsible for sustainability strategy and climate change risk. Meanwhile, IPL also has a Governance Committee that is responsible for the company's approach to sustainability reporting.

<u>Keyera:</u> has a Health, Safety and Environment (HSE) Board Committee which has oversight of Keyera's environmental, health, safety and regulatory performance and related policies. In respect of governance and social matters, the Board is assisted by the Compensation and Governance Committee.

<u>Pembina:</u> added Sustainability to the charter of the Governance, Nominating and Corporate Social Responsibility (CSR) Committee of the Board.

<u>Superior:</u> has a Health, Safety and Environment (HS&E) committee, which oversees the development and implementation of programs, systems and initiatives regarding health, safety and environmental risks.

<u>TC Energy:</u> added Sustainability to the mandate of the Health, Safety, Sustainability and Environment Committee. The company also has an Audit Committee, which has oversight of cybersecurity and related risks.

# Appendix G:

**Exhibit 34: NBF Pipelines, Utilities & Infrastructure Comparables** 

			Market	-1. (A (1)		Net Debt/	Cash	AFFO			EV/	EV/Free-	12 mo.	Total	
Company Name	TSX Ticker	Price 31-Jan-20	Cap (\$mIn) Current	EV (\$mIn) <sup>(1)</sup> 2021e	D/EV %	EBITDA <sup>(2)</sup> 2021e	Yield %	Payout 2021e	P/E 2021e	P/AFFO 2021e	EBITDA 2021e	EBITDA 2021e	Target	Return %	Ratings
	Tickei	31-3411-20	Current	20216	/0	20216	/0	20216	20216	20216	20216	20216		/0	
Midstream															
AltaGas	ALA	\$21.31	5,951	13,569	56%	5.1x	4.5%	44%	na	9.7x	10.2x	13.1x	\$25.00	21.8%	OP
Gibson Energy	GEI	\$26.56	3,926	5,524	29%	3.2x	5.5%	64%	na	11.9x	11.1x	12.9x	\$30.00	18.4%	SP
Inter Pipeline	IPL	\$22.05	9,318	16,181	42%	6.6x	7.8%	96%	na	12.3x	16.0x	17.1x	\$24.00	16.6%	SP
Keyera	KEY	\$34.53	7,703	10,942	30%	3.3x	5.9%	69%	na	11.7x	11.9x	13.6x	\$42.00	27.5%	OP
Pembina Pipeline	PPL	\$50.68	27,756	44,771	38%	4.3x	5.3%	56%	na	10.7x	12.3x	12.7x	\$62.00	27.6%	OP
Superior Plus	SPB	\$11.55	2,052	3,808	46%	3.3x	6.2%	53%	na	8.4x	7.6x	9.6x	\$13.00	18.8%	SP
Tidewater Midstream	TWM	\$1.08	362	1,071	66%	2.9x	3.9%	11%	na	3.0x	4.7x	5.9x	\$1.75	65.9%	OP
Midstream Median					42%	3.3x	5.5%	56%		10.7x	11.1x	12.9x		21.8%	
Pipelines															
Enbridge	ENB	\$53.81	108,221	182,332	41%	4.9x	6.6%	73%	21.5x	11.0x	12.7x	13.7x	\$62.00	21.8%	OP
TC Energy Corp.	TRP	\$72.57	68,059	123,102	45%	5.0x	5.0%	65%	17.0x	12.9x	12.8x	14.8x	\$75.00	8.4%	SP
Pipelines Median					43%	4.9x	5.8%	69%	19.2x	12.0x	12.7x	14.2x		15.1%	
Power															
Capital Power	CPX	\$36.21	3,809	7,869	52%	3.3x	5.9%	41%	17.6x	7.0x	7.8x	8.9x	\$42.00	21.9%	OP
TransAlta	TA	\$9.88	2,782	8,418	67%	3.5x	1.7%	10%	na	6.0x	7.8x	9.0x	\$11.00	13.1%	SP
Power Median					59%	3.4x	3.8%	26%		6.5x	7.8x	8.9x		17.5%	
Jtilities															
Altagas Canada Inc.	ACI	\$33.45	1,004						Re	stricted					
ATCO Ltd.	ACO	\$51.62	5,918	24,440	76%	4.5x	3.4%	74%	17.7x	22.1x	12.8x	16.8x	\$52.00	4.1%	SP
Canadian Utilities	CU	\$40.50	11,060	20,929	47%	5.1x	4.3%	59%	19.4x	13.8x	11.5x	15.5x	\$42.00	8.0%	SP
Emera	EMA	\$58.96	14,482	30,491	53%	5.9x	4.4%	61%	19.5x	14.1x	11.9x	17.0x	\$61.00	7.8%	SP
Fortis	FTS	\$57.72	26,982	55,671	52%	6.3x	3.6%	49%	21.4x	13.8x	13.1x	17.3x	\$60.00	7.5%	SP
Hydro One	н	\$26.90	16,057	30,038	47%	5.8x	4.0%	74%	18.5x	18.8x	12.3x	20.4x	\$27.00	4.3%	SP
Jtilities Median					52%	5.8x	4.0%	61%	19.4x	14.1x	12.3x	17.0x		7.5%	

Note: UP = Underperform, SP = Sector Perform, OP = Outperform, NR = Not Rated

Source: Company Reports, NBF Estimates Thomson Reuter

<sup>(1)</sup> Includes 100% of Preferred Equity

<sup>(2)</sup> Includes 50% of Preferred Equity



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