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# The Current State and Evolution of Climate Change Disclosure in the Canadian Oil and Gas Sector

## Introduction

- The oil and gas sector represents more than 60% of the global commercial energy mix and ~26% of Canada's total emissions (Beck et al., 2020; Cardoni et al., 2019; IEA, 2021; Ritchie & Roser, 2020; Tasker, 2021).
- Few studies (e.g., Berthelot & Robert, 2011) have evaluated quality of climate change disclosure in the Canadian oil and gas sector.

## Research Questions

- To what extent do oil and gas sector companies in Canada comply with disclosure frameworks?
- What is the trend in climate change disclosure in the oil and gas sector over the past 5 years?
- What is the best performing oil and gas sector company in terms of climate disclosure in Canada?

## Methodology

- A composite index (Sincerity Score) that measures the quality of both backward looking (Historical Disclosure Index) and future-oriented climate change disclosure (Forward-looking Disclosure Index) was created:

$$SS = HDI + FDI$$

- The HDI and FDI measure disclosure in 8 pillars of disclosure (Table 1). The pillars and their associated indicators were derived from disclosure frameworks such as SASB, GRI, American Petroleum Institute (API), International Petroleum Industry Environmental Conservation Association (IPIECA) & International Association of Oil & Gas Producers (IOGP).

- The HDI and FDI were devised from combining certain pillars:

$$HDI = Pillar 1 + Pillar 4 + Pillar 7$$

$$FDI = Pillar 2 + Pillar 3 + Pillar 5 + Pillar 6 + Pillar 8$$

- For the 7 largest companies in terms of market cap (Table 2), sustainability and annual reports from 2016-2020 were obtained.
- Indicators for each pillar were scored and then aggregated for each company. The following scores were assigned:
  - A score of 0 – No or incomplete disclosure
  - A score of 1 – Partial disclosure without comparable data
  - A score of 2 – Full disclosure with comparable data

## Key Findings

- Quality of disclosure was inconsistent across all pillars. No company had the lowest quality of disclosure in all pillars or the highest quality of disclosure in all pillars.
- Pillar 6 shows the best quality of disclosure, while Pillar 3 shows the worst quality of disclosure
- Most sample companies show an overall increasing trend in HDI scores from 2016 to 2020
- Most sample companies show an overall increasing trend in FDI scores from 2016 to 2020
- Most sample companies show an overall increasing trend in SS scores from 2016 to 2020 (Figure 1)
- All sample companies have improved the quality of their climate change disclosure since 2016
- Suncor is the best performing large-cap oil and gas company in terms of climate disclosure in Canada

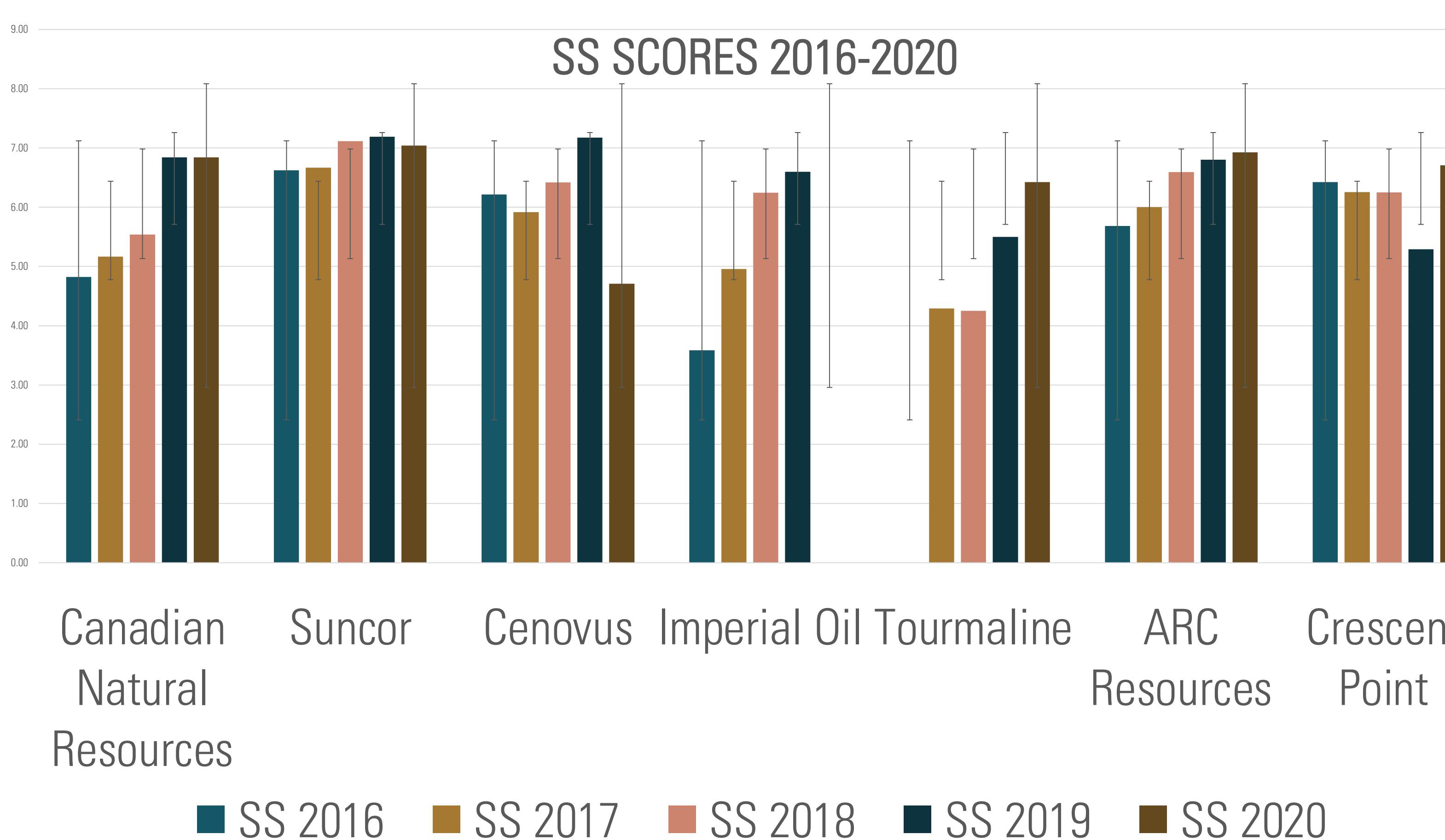
Table 1. Pillars and Maximum Possible Score for each.

Pillar	Description	Max. Possible Score
1	GHG Emissions	24
2	Emission Targets	12
3	CapEX & Reserves	6
4	Management of Legal & Regulatory Environment	4
5	Business Model Resilience	6
6	Transition Activities	4
7	Internal Processes & Activities	4
8	Industry Leadership & Participation	6

Table 2. Company Sample. Data from TSX Energy Issuers August 2021, by Toronto Stock Exchange, 2021, (https://www.tsx.com/resource/en/713).

Company	Market Cap (CAD\$ as of August 31, 2021)
Canadian Natural Resources Ltd	49,527,810,113
Suncor Energy Inc.	34,938,365,117
Imperial Oil Limited	23,426,068,664
Genovus Energy Inc.	21,851,379,036
Tourmaline Oil Corp.	11,004,474,187
ARC Resources Ltd.	6,531,820,962
Crescent Point Energy Corp.	2,635,147,047

Figure 1. SS Scores for Company Sample from 2016-2020. Error Bars show Standard Deviation



## Discussion

- Quality of climate change disclosure by oil and gas companies in Canada has improved since 2016 for three key reasons:
  - Companies are disclosing investor and framework aligned information (Berthelot & Robert, 2011; Hahn et al., 2015; Morhardt et al., 2002; Nikolaou & Tsalis, 2013; Papoutsis & Sodhi, 2020).
  - Emerging compliance expectations are creating regulatory pressures in the oil and gas sector.
  - Transparency and responsibility being demanded by environmentally conscious stakeholders
- Future research should investigate how smaller market-cap oil and gas companies' disclosure fares, in terms of transparency and quality of climate change disclosure, compared to the larger-cap companies

## References

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