



The 2019 Best 50:  
Overview of Methodology

Corporate **Knights**

[WWW.CORPORATEKNIGHTS.COM](http://WWW.CORPORATEKNIGHTS.COM)

# Best 50 fast facts

## Overview

- **Annual ranking** of corporate sustainability performance.
- **Released each June** during the Corporate Knights Gala Dinner; published in Corporate Knights Magazine.

## Approach

- Ranking is based on **publicly-disclosed data** (e.g., financial filings, sustainability reports). All required datapoints are pre-populated. Submissions from companies are **not** required.
- Companies part of the Best 50 starting universe **are contacted for data verification** prior to project completion.
- Methodology is based on up to **21 key performance indicators** (KPIs) covering resource, employee, financial management, clean revenue and supplier performance.

## Eligibility

- *Size: Canadian companies:* Publicly-traded, privately-owned or cooperative organizations or Crown corporations with gross revenue of at least \$1 billion (most recent financial data) and evidence of sustainability reporting\*.
- *Corporate Knights Industry Group (CKIG) and geography:* All industries and geographies are automatically considered before screening out companies from certain industries or with identified egregious practices.

## Contact info and to learn more

- Email [research@corporateknights.com](mailto:research@corporateknights.com) if you would like to confirm or update the correct contacts for your organization
- [Sign up for email updates](#) on future rankings and research from Corporate Knights
- Visit [www.corporateknights.com/reports/2019-best-50/](http://www.corporateknights.com/reports/2019-best-50/) for more details

\*For non-publicly-traded organizations only; determined from the Global Reporting Initiative database

# Ranking is conducted by Corporate Knights, a specialized media and investment research firm

Corporate Knights is a Toronto-based, employee-owned B Corp that operates in three segments:

- **Corporate Knights Magazine**
  - World's largest circulating magazine focused on sustainability and responsible business.
  - Reaches 443,250 of the world's most influential business and political decision-makers.
- **Corporate Knights Research**
  - CK Research offers a range of corporate sustainability ratings, investment product ratings and tools.
  - CK Research also manages several external research projects (e.g. Carbon Clean 200, Sustainable Stock Exchange Ranking, Global Green Financial Index).
- **Council for Clean Capitalism**
  - CEO-supported group catalyzing smart and efficient public policy.
  - Engages with leading public policy-makers.

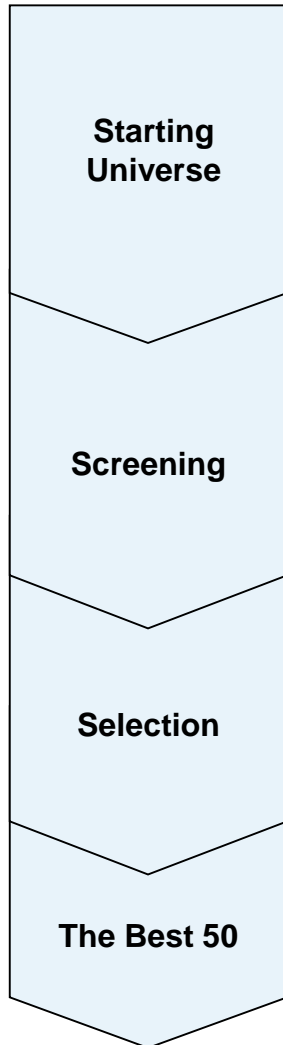
# Philosophical perspective of the Best 50

- **Relevance:** The ranking is meant to be representative of business sustainability in the current socio-economic context.
- **Transparency:** The precise methodology of the ranking and the results of the process are fully disclosed.
- **Objectivity:** Eligible companies will only be assessed using quantitative data and performance indicators.
- **Public data:** Only data-points that are part of the public domain are used.
- **Comparability:** Companies are compared against their *Corporate Knights Industry Groups*\* peers based on performance indicators for which the underlying data are reasonably well disclosed by their industry group globally.
- **Engagement:** Companies eligible for the ranking are informed prior to the ranking, so as to have an opportunity to ensure the necessary data is made available publicly.
- **Stakeholders:** Stakeholder feedback is actively solicited throughout the project. A Panel of Experts, consisting of several sustainability practitioners, review and comment on all aspects of the methodology.

\* The Corporate Knights Industry Group (CKIG) is constructed using combinations of FactSet RBICS Subsectors and Industry Groups to ensure sufficient population for percentile ranking and pairing along resource productivity ratios and clean revenue exposures.

There are 97 CK Industry Groups.

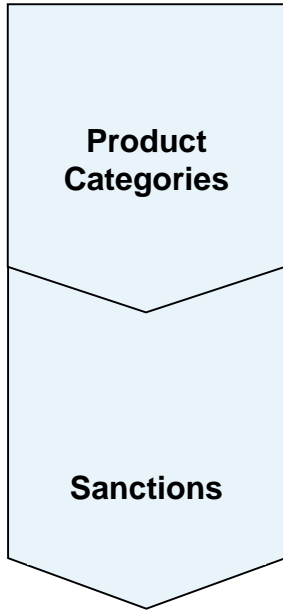
# Overview of the Best 50 ranking process



## Description

- Canadian-headquartered private organizations, cooperatives and crown corporations with at least \$1 billion in revenue and evidence of sustainability reporting
  - Canadian credit unions with at least \$10 billion in assets and evidence of sustainability reporting
  - Companies listed in Canada (TSX60 or revenue of at least \$1 billion)
  - All Best 50 companies from previous year are grandfathered to starting universe
- 
- Companies screened for :
    - Product categories and behaviour
    - Financial sanctions
- 
- Companies are scored on up to 21 KPIs ('priority KPIs' for their respective CK Industry Groups, and all the Universal KPIs. See appendix II)
- 
- The 2019 *Best 50* is populated according to overall score

# Screening criteria



## Description

- Companies involved in certain products or services and behaviours counterproductive to sustainable development.
- Companies that are bottom quartile performers in the CK Financial Sanctions screen are eliminated.

## Details

- Examples include weapons, tobacco, companies identified for egregious anti-climate lobbying.
- See Appendix III for a full list of exclusionary screens.
- The screen measures the amount of money that companies paid out in qualifying fines, penalties or settlements over the October 1, 2017 to February 28, 2019 period.
- Sanctions include but are not limited to human rights, labour, environmental, anti-trust and community-related violations.
- See Appendix I for details.

# Rating methodology

## 2019 Best 50 Ranking

# Resource management KPIs

KPI	Methodology
<b>Energy Productivity</b>	Revenue (converted to USD using <b>PPP exchange rate</b> ) / (Energy use – <b>renewable energy use</b> )
<b>GHG Productivity</b>	Revenue (converted to USD using <b>PPP exchange rate</b> ) / GHG emissions: scope 1 & 2
<b>Water Productivity</b>	Revenue (converted to USD using <b>PPP exchange rate</b> ) / Water use
<b>Waste Productivity</b>	Revenue (converted to USD using <b>PPP exchange rate</b> ) / Non-recycled or reused waste generated
<b>VOC Productivity</b>	Revenue (converted to USD using PPP exchange rate) / VOC emissions
<b>NOx Productivity</b>	Revenue (converted to USD using PPP exchange rate) / NOx emissions
<b>SOx Productivity</b>	Revenue (converted to USD using PPP exchange rate) / SOx emissions
<b>Particulate Matter Productivity</b>	Revenue (converted to USD using PPP exchange rate) / Particulate matter emissions

**Companies will only be scored on the KPIs that are deemed “priority KPIs” for their respective CK Industry Group + the eight universal KPIs**



# Financial management KPIs

KPI	Methodology
<b>Innovation Capacity</b>	R&D expenses / revenue – three year trailing
<b>Percentage Tax Paid</b>	Cash tax amount paid / EBITDA – five year trailing (2013-2017)
<b>CEO-Average Employee Pay</b>	CEO compensation / average employee compensation
<b>Pension Fund Status</b>	75%*(total DB and DC employer contributions/ FTE employees percentile-ranked against peers) + 25%*(fair value of DB plan assets/FTE employees percentile-ranked against peers - (1-(fair value of DB plan assets/liability percentile-ranked against peers) ). Note: DC contributions include 401(k), RRSPs and equivalents
<b>Supplier Sustainability Score</b>	<ul style="list-style-type: none"> <li>▪ The weighted CK Sustainability Score of a company's largest suppliers (up to 10 largest suppliers by spend).</li> </ul>

**Companies will only be scored on the KPIs that are deemed “priority KPIs” for their respective CK Industry Group + the eight universal KPIs**

# Employee management KPIs

KPI	Methodology
Injuries	Lost time incidents rate
Fatalities	All employee and contractor fatalities/ total number of full-time equivalent employees
Employee Turnover	Number of departures / average total employees
Women in Executive Management	Women representation in executive management team (percentile-ranked against all companies in the universe)
Women on Boards	Women representation on board of directors (percentile ranked against all companies in the universe)
Sustainability Pay Link	Mechanisms that link senior executive pay to sustainability targets


**Companies will only be scored on the KPIs that are deemed “priority KPIs” for their respective CK Industry Group + the eight universal KPIs**

## Deduction due to sanctions

KPI	Methodology
Sanction Deductions	Total fines penalties and settlements / revenue (one year)

**Companies will only be scored on the KPIs that are deemed “priority KPIs” for their respective CK Industry Group + the eight universal KPIs**

# Additional KPIs

KPI	Methodology
<p><b>Clean Revenue</b></p> <p><i>* This is a multi-year project by Corporate Knights to develop and make publicly-available an open-source definition of clean revenue categories for all sub-sectors; we welcome comments and suggestions in evolving and refining this clean revenue definition.</i></p>	<p>Percentage of your total revenue derived from products and services that are categorized as “clean” according to the Corporate Knights open-source clean revenue taxonomy, which is informed by synthesis of the below sources and best practices:</p> <ul style="list-style-type: none"> <li>- Green Goods and Services (U.S. Bureau of Labor Statistics)</li> <li>- Environmental and clean Technology Products Economic Account (Statistics Canada)</li> <li>- Climate Bonds Taxonomy (Climate Bonds Initiative)</li> <li>- Sustainable Taxonomy (High-Level Expert Group in Sustainable Finance)</li> <li>- Environmental Goods and Services Sector (Eurostat)</li> <li>- China Green Bond Endorsed Project Catalogue</li> <li>- Green Bond Principles</li> <li>- TCFD recommended climate opportunity metrics</li> <li>- Other private sector rating agencies with green or sustainability taxonomy</li> <li>- Industry experts consultation covering all relevant CKIG subsectors with solicited feedback on industry definition of clean from leading industry experts and government agencies</li> </ul> <p>Please <b>click</b> on the <b>link below</b> to view the full list of products and services that are categorized as clean</p> <p style="text-align: center;"></p> <p style="text-align: center;"><a href="https://docs.google.com/spreadsheets/d/1Yit1pphFcx-axawF_Y9G8ZBSJe9A-xf2CSWNuBxAkw/edit?usp=sharing">https://docs.google.com/spreadsheets/d/1Yit1pphFcx-axawF_Y9G8ZBSJe9A-xf2CSWNuBxAkw/edit?usp=sharing</a></p>

**This is a Universal KPI: all companies will only be scored on this KPI irrespective of CK Industry Group**

# The Eight Universal KPIs

**All** companies, irrespective of **CK Industry Group** will still be assessed on all eight universal KPIs:

- Percentage Tax Paid,
- Pension Fund Status,
- Supplier Sustainability Score (except financial services organizations)
- Women in Executive Management,
- Women on Boards,
- Sustainability Pay Link
- Sanctions Deductions
- Clean Revenue

# Priority KPIs and weighting scheme for each CK Industry Group under the updated methodology

# Impact-weighted KPIs

**Philosophy:** Each CK Industry Group accounts for a unique share of global impact for each individual KPI. The bigger the CK Industry Group's impact for a given performance metric is in relation to others in the CK Industry Group, the higher the weight of that KPI. Of the 21 indicators, 16 are weighted according to their relative impact, and five are assigned pre-determined fixed weights: Clean Revenue (50%), Sustainability Pay Link (5%), Supplier Sustainability Score (2.5%), Women in Executive Management (5%) and Women Board Members (5%).

## Impact calculation example - Energy use by the Wholesale Power CK Industry Group as an example:

The average Energy Productivity over the past three years for all companies in the coverage universe is calculated as well as the average energy productivity for each CK Industry Group. The weight assigned to the Energy Productivity indicator for a given industry group is a function of the ratio of the industry group average Energy Productivity / entire coverage universe Energy Productivity.

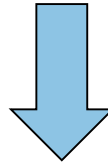
## Weighing KPIs according to impact – Wholesale Power CK Industry Group as an example:

The Wholesale Power industry group has 21 applicable KPIs. Of these, Clean revenue, Women on Boards, Women in Executive Management, Supplier Sustainability Score and Sustainability Pay Link have fixed weights (50%, 5%, 5% 2.5% and 5% respectively). The remaining 16 KPIs, representing the remaining 32.5% of the weights are weighted in accordance to the relative magnitudes of their impacts: for instance, Wholesale Power's impact on water is 17.3 times the global average. Its weight is:  $17.3/54.3 \times 32.5\% = 10.4\%$ .

	Energy	GHG	Water	Waste	VOC	NOx	SO <sub>2</sub>	PM	Innovation Capacity	Percentage Tax Paid	CEO – Avg Employee Pay	Pension Fund Status	Supplier Sustain Score	Injuries	Fatalities	Employee Turnover	Women in Exec Mgt	Women on Boards	Sustain Pay Link	Sanctions Deduction	Clean Revenue
<b>Impact ratio</b>	11.6	7.8	<b>17.3</b>	3.0	0	2.3	2.0	3.0	0.2	1.7	0.5	1.6	-	0.4	2.3	0.5	-	-	-	-	-
<b>Final Weight</b>	7.0%	4.7%	<b>10.4%</b>	1.8%	0.0%	1.3%	1.2%	1.8%	0.1%	1.0%	0.3%	1.0%	2.5%	0.3%	1.4%	0.3%	5%	5%	5%	0	50%

## Priority indicators and weights per CK Industry

Please **click** on the icon below to open the list of priority indicators and weights for each CK Industry Group.



[https://docs.google.com/spreadsheets/d/1HFwzQNeiB6V\\_WWQjsYfeP8NSZpumdi1HXK02zNeCJPc/edit#gid=241897220](https://docs.google.com/spreadsheets/d/1HFwzQNeiB6V_WWQjsYfeP8NSZpumdi1HXK02zNeCJPc/edit#gid=241897220)



# Appendix I: The CK Financial Sanctions Screen

- The CK Financial Sanctions screen measures the amount of money that companies have paid out in qualifying fines, penalties or settlements on a trailing one-year (October 1, 2017 – February 28, 2019) basis.\*
- *Approach*
  1. Data on fines, penalties or settlements is obtained for each company. Payouts may relate to repercussions from environmental accidents, generalized environmental pollution, infringement of labour standards, human rights-related abuses, price-fixing, child exploitation or violation of collective bargaining arrangements.
  2. Payouts that occurred from October 1, 2017 to February 28, 2019 are totaled and converted to USD (using the prevailing exchange rate at the time of the payout) and then divided by total revenue reported over the same period.
  3. The resulting ratio is then percent-ranked against all companies in the same CK Industry Group.
  4. Those companies that receive a bottom quartile percent score (e.g. 25% or below) are eliminated from contention for the Best 50.

Note: CK reserves the right to include major financial sanctions that occur between this date and before the ranking is published.

# Appendix I: Detailed scoring methodology

#	Name of KPI	Measurement	UN Sustainable Development Goals
1	Energy Productivity	In the first step, each company's Energy Productivity is calculated. Energy Productivity is defined as Revenue (\$PPP-converted) / Total Energy Use (GJ) – Renewable Energy Use (GJ). It is then percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Energy Productivity over a two-year period is calculated and percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.	<ul style="list-style-type: none"> <li>• <b>GOAL 7: Affordable and Clean Energy (Ensure access to affordable, reliable, sustainable and modern energy for all)</b></li> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> </ul>
2	GHG Productivity	In the first step, each company's Greenhouse Gas (GHG) Productivity is calculated. GHG Productivity is defined as Revenue (\$PPP-converted) / Total Greenhouse gas (GHG) Emissions (CO2e). Only Scope 1 and Scope 2 emissions are included according to the GHG Protocol. It is then percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's GHG Productivity over a two-year period is calculated and percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.	<ul style="list-style-type: none"> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> <li>• <b>GOAL 13: Climate Action (Take urgent action to combat climate change and its impacts)</b></li> </ul>

## Appendix II: Detailed scoring methodology

3	Water Productivity	<p>In the first step, each company's Water Productivity is calculated. Water Productivity is defined as Revenue (\$PPP-converted) / Total water (m3). It is then percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Water Productivity over a two-year period is calculated and percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 6: Clean Water and Sanitation (Ensure availability and sustainable management of water and sanitation for all)</b></li> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> <li>• <b>GOAL 15: Life on Land (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss)</b></li> </ul>
4	Waste Productivity	<p>In the first step, each company's Waste Productivity is calculated. Waste Productivity is defined as Revenue (\$PPP-converted) / [Total waste generated (metric tonnes) – waste recycled (metric tonnes)]. It is then percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Waste Productivity over a two-year period is calculated and percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> <li>• <b>GOAL 11: Sustainable Cities and Communities (Make cities and human settlements inclusive, safe, resilient and sustainable)</b></li> <li>• <b>GOAL 12: Responsible Consumption and Production (Ensure sustainable consumption and production patterns)</b></li> </ul>

## Appendix II: Detailed scoring methodology (continued)

5	VOC Productivity	<p>In the first step, each company's sub-indicator Productivity is calculated by dividing Revenue (\$PPP-converted) by the air pollutant. It is then percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's sub-indicator Productivity over a two-year period is calculated and percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 3: Good Health and Well-being (Ensure healthy lives and promote well-being for all at all ages)</b></li> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> <li>• <b>GOAL 11: Sustainable Cities and Communities (Make cities and human settlements inclusive, safe, resilient and sustainable)</b></li> <li>• <b>GOAL 12: Responsible Consumption and Production (Ensure sustainable consumption and production patterns)</b></li> </ul>
6	NOx Productivity		
7	SOx Productivity		
8	Particulate Matter Productivity		
9	Innovation Capacity	<p>In the first step, each company's Innovation Capacity score is determined by measuring the ratio of research and development (R&amp;D) expenditures to total revenue averaged over a trailing three-year period. In the second step, each company's Innovation Capacity score is percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe.</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation )</b></li> </ul>

## Appendix II: Detailed scoring methodology (continued)

10	Percentage Tax Paid	<p>In the first step, each company's Percentage Tax Paid is calculated as the amount of taxes paid in cash over a trailing five year period (2013-2017) divided by their total EBITDA over the same period. Companies score a 0% in the event that their total EBITDA or taxes paid in cash is zero or lower over the five year period (2013-2017). In the second step, each company's Percentage Tax Paid is percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe.</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 10: Reduced Inequality (Reduce inequality within and among countries)</b></li> </ul>
11	CEO-Average Employee Pay	<p>Each company's CEO to Average Employee Pay ratio is calculated as total CEO compensation divided by average employee compensation. Average employee compensation is calculated by dividing the company's total wage bill by the total number of employees. Each company's CEO to Average Employee Pay ratio is percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. [The lower the ratio, the higher the rank.]</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> <li>• <b>GOAL 10: Reduced Inequality (Reduce inequality within and among countries)</b></li> </ul>
12	Pension Fund Status	<p>In the first step, the sum of the company's contribution to the defined benefit and defined contribution pension plans are added up, then divided by the total number of full-time equivalent employees. Note that DC contributions include 401(k), RRSPs and equivalents. This ratio is then percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. This is labelled as "A"</p> <p>In the second step, the fair value of the defined benefit plan assets is divided by the total number of full-time equivalent employees; this ratio is then percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. This is labelled as "B",</p> <p>In the third step, the fair value of the defined benefit plan assets is divided by the projected defined benefit plan obligations, then percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. This is labelled as "C".</p> <p>The Pension Fund Status Score is arrived at by the following formula: <math>(0.75 \times A) + 0.25(B - (1 - C))</math></p>	<ul style="list-style-type: none"> <li>• <b>GOAL 1: No Poverty (End poverty in all its forms everywhere)</b></li> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> </ul>

## Appendix II: Detailed scoring methodology (continued)

13	Supplier Sustainability Score	Each company's largest suppliers (up to ten) by total spend are identified based on FactSet data. The suppliers are then weighted and scored using the Best 50 methodology, excluding the Supplier Sustainability Score KPI.	<ul style="list-style-type: none"> <li>• <b>GOAL 1: No Poverty (End poverty in all its forms everywhere)</b></li> <li>• <b>GOAL 2: Zero Hunger (End hunger, achieve food security and improved nutrition and promote sustainable agriculture)</b></li> <li>• <b>GOAL 3: Good Health and Well-being (Ensure healthy lives and promote well-being for all at all ages)</b></li> <li>• <b>GOAL 5: Gender Equality (Achieve gender equality and empower all women and girls)</b></li> <li>• <b>GOAL 6: Clean Water and Sanitation (Ensure availability and sustainable management of water and sanitation for all)</b></li> <li>• <b>GOAL 7: Affordable and Clean Energy (Ensure access to affordable, reliable, sustainable and modern energy for all)</b></li> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> <li>• <b>GOAL 10: Reduced Inequality (Reduce inequality within and among countries)</b></li> <li>• <b>GOAL 11: Sustainable Cities and Communities (Make cities and human settlements inclusive, safe, resilient and sustainable)</b></li> <li>• <b>GOAL 12: Responsible Consumption and Production (Ensure sustainable consumption and production patterns)</b></li> <li>• <b>GOAL 13: Climate Action (Take urgent action to combat climate change and its impacts)</b></li> <li>• <b>GOAL 14: Life Below Water (Conserve and sustainably use the oceans, seas and marine resources for sustainable development)</b></li> <li>• <b>GOAL 15: Life on Land (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss)</b></li> <li>• <b>GOAL 16: Peace and Justice Strong Institutions (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels)</b></li> <li>• <b>GOAL 17: Partnerships to achieve the Goal (Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development)</b></li> </ul>
----	-------------------------------	--	--

## Appendix II: Detailed scoring methodology (continued)

14	Injuries	Each company's Injury Score is determined by calculating the company's lost time injury rate (defined as the number of lost time incidents per 200,000 employee hours) and percent-ranking it against all of the same-CK Industry Group peers within the CK coverage universe.	<ul style="list-style-type: none"> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> </ul>
15	Fatalities	Each company's Fatality Score is determined by calculating the company's fatality rate (defined as the number of fatalities by employees and contractors divided by the total number of full-time equivalent employees) and percent-ranking it against all of the same-CK Industry Group peers within the CK coverage universe.	<ul style="list-style-type: none"> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> </ul>
16	Employee Turnover	Each company's Employee Turnover (Number of departures / average total employees) is percent-ranked against all of the same CK Industry Group peers within the CK coverage universe. [The lower the ratio, the higher the rank.]	<ul style="list-style-type: none"> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> </ul>
17	Women in Executive Management	Each company's Executive Diversity Score is calculated by determining the proportion of the senior executive team that is comprised of women executives and percent-ranking it against all companies within the CK coverage universe.	<ul style="list-style-type: none"> <li>• <b>GOAL 5: Gender Equality (Achieve gender equality and empower all women and girls)</b></li> </ul>
18	Women on Boards	Each company's Board Diversity Score is calculated by determining the proportion of the Board of Directors that is comprised of women directors and percent-ranking it against that of all companies within the CK coverage universe.	<ul style="list-style-type: none"> <li>• <b>GOAL 5: Gender Equality (Achieve gender equality and empower all women and girls)</b></li> </ul>

## Appendix II: Detailed scoring methodology (continued)

19	Sustainability Pay Link	<p>The Sustainability Pay Link indicator is designed to reward companies that have set up mechanisms to link the remuneration of senior executives with the achievement of sustainability goals or targets. A score of 100% is given to companies that describe such a mechanism (e.g. the company specifies the proportion of a particular named executive's compensation that is linked to the achievement of a corporate clean capitalism target, such as reducing emissions, improving energy efficiency, or reducing health &amp; safety accidents). A score of 0% is given to companies that do not report any linking mechanisms. Unlike all other indicators, Sustainability Pay Link does not use any percent-ranking.</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 3: Good Health and Well-being (Ensure healthy lives and promote well-being for all at all ages)</b></li> <li>• <b>GOAL 5: Gender Equality (Achieve gender equality and empower all women and girls)</b></li> <li>• <b>GOAL 6: Clean Water and Sanitation (Ensure availability and sustainable management of water and sanitation for all)</b></li> <li>• <b>GOAL 7: Affordable and Clean Energy (Ensure access to affordable, reliable, sustainable and modern energy for all)</b></li> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> <li>• <b>GOAL 10: Reduced Inequality (Reduce inequality within and among countries)</b></li> <li>• <b>GOAL 11: Sustainable Cities and Communities (Make cities and human settlements inclusive, safe, resilient and sustainable)</b></li> <li>• <b>GOAL 12: Responsible Consumption and Production (Ensure sustainable consumption and production patterns)</b></li> <li>• <b>GOAL 13: Climate Action (Take urgent action to combat climate change and its impacts)</b></li> <li>• <b>GOAL 14: Life Below Water (Conserve and sustainably use the oceans, seas and marine resources for sustainable development)</b></li> <li>• <b>GOAL 15: Life on Land (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss)</b></li> <li>• <b>GOAL 16: Peace and Justice Strong Institutions (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels)</b></li> </ul>
----	-------------------------	---	---



## Appendix II: Detailed scoring methodology (continued)

20	Sanctions Deduction	<p>Each company's Sanctions' ratio is determined by measuring the ratio of Sanctions (the amount of money that companies paid out in qualifying fines, penalties or settlements over the October 1, 2017 to November 30, 2018 period) to total revenue for the same or closest match period. Each company's Sanctions ratio is percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe. Companies receive deductions on a graded scale up to a maximum of 5% off their overall score. Companies with no Sanctions receive no deductions. A 5% deduction is applied to a company's overall score if it has the worst-in-class record (0 percentile) on financial sanctions over the relevant time period, 5% if they are in the third quartile (25-49%), 2.5% if they are in the second quartile (50-74%), 1% if they are in the first quartile (75-99%) with those scoring 100% (i.e. no fines) get no deductions.</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 1: No Poverty (End poverty in all its forms everywhere)</b></li> <li>• <b>GOAL 3: Good Health and Well-being (Ensure healthy lives and promote well-being for all at all ages)</b></li> <li>• <b>GOAL 5: Gender Equality (Achieve gender equality and empower all women and girls)</b></li> <li>• <b>GOAL 6: Clean Water and Sanitation (Ensure availability and sustainable management of water and sanitation for all)</b></li> <li>• <b>GOAL 7: Affordable and Clean Energy (Ensure access to affordable, reliable, sustainable and modern energy for all)</b></li> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> <li>• <b>GOAL 10: Reduced Inequality (Reduce inequality within and among countries)</b></li> <li>• <b>GOAL 11: Sustainable Cities and Communities (Make cities and human settlements inclusive, safe, resilient and sustainable)</b></li> <li>• <b>GOAL 12: Responsible Consumption and Production (Ensure sustainable consumption and production patterns)</b></li> <li>• <b>GOAL 13: Climate Action (Take urgent action to combat climate change and its impacts)</b></li> <li>• <b>GOAL 14: Life Below Water (Conserve and sustainably use the oceans, seas and marine resources for sustainable development)</b></li> <li>• <b>GOAL 15: Life on Land (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss)</b></li> <li>• <b>GOAL 16: Peace and Justice Strong Institutions (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels)</b></li> </ul>
----	---------------------	---	--

## Appendix II: Detailed scoring methodology (continued)

21	Clean Revenue	<p>Each company's Clean Revenue ratio is determined by measuring the ratio of Clean Revenue to total revenue according to the open-source Corporate Knights Clean Revenue Taxonomy. Each company's Clean Revenue ratio is percent-ranked against all of the same-CK Industry Group peers within the CK coverage universe.</p>	<ul style="list-style-type: none"> <li>• <b>GOAL 1: No Poverty (End poverty in all its forms everywhere)</b></li> <li>• <b>GOAL 2: Zero Hunger (End hunger, achieve food security and improved nutrition and promote sustainable agriculture)</b></li> <li>• <b>GOAL 3: Good Health and Well-being (Ensure healthy lives and promote well-being for all at all ages)</b></li> <li>• <b>GOAL 4: Quality Education (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all)</b></li> <li>• <b>GOAL 5: Gender Equality (Achieve gender equality and empower all women and girls)</b></li> <li>• <b>GOAL 6: Clean Water and Sanitation (Ensure availability and sustainable management of water and sanitation for all)</b></li> <li>• <b>GOAL 7: Affordable and Clean Energy (Ensure access to affordable, reliable, sustainable and modern energy for all)</b></li> <li>• <b>GOAL 8: Decent Work and Economic Growth (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)</b></li> <li>• <b>GOAL 9: Industry, Innovation and Infrastructure (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)</b></li> <li>• <b>GOAL 10: Reduced Inequality (Reduce inequality within and among countries)</b></li> <li>• <b>GOAL 11: Sustainable Cities and Communities (Make cities and human settlements inclusive, safe, resilient and sustainable)</b></li> <li>• <b>GOAL 12: Responsible Consumption and Production (Ensure sustainable consumption and production patterns)</b></li> <li>• <b>GOAL 13: Climate Action (Take urgent action to combat climate change and its impacts)</b></li> <li>• <b>GOAL 14: Life Below Water (Conserve and sustainably use the oceans, seas and marine resources for sustainable development)</b></li> <li>• <b>GOAL 15: Life on Land (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss)</b></li> <li>• <b>GOAL 16: Peace and Justice Strong Institutions (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels)</b></li> <li>• <b>GOAL 17: Partnerships to achieve the Goal (Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development)</b></li> </ul>
----	---------------	---	---

## Appendix III: Exclusionary Screens

Metric	Metric Description
Farm Animal Welfare	Identifies company laggards (Tier 5 or 6) on Farm Animal Welfare practices, based on the Benchmark for Farm Animal Welfare.
Industrial Meat	Identifies meat companies, according to FactSet RBICS.
Corporate Fines, Penalties or Settlements	Identifies laggard companies (bottom quartile) with high monetary fines, penalties and settlements paid as a percentage of total revenue.
Tobacco	Identifies companies which earn more than 5% of revenue from tobacco using FactSet's RBICS.
Controversial Weapons	Identifies companies aggregated from NBIM's exclusions for cluster munitions and nuclear weapons
Conventional Weapons	Identifies the Top 100 weapons producers as tracked by Stockholm International Peace Research Institute (SIPRI) and companies which earn more than 50% of revenue from weapons using FactSet's RBICS.
Small Arms (Hand Guns)	Identifies companies which earn more than 5% of revenue from sale of handguns using FactSet's RBICS.
Blocking Climate Policy	Identifies laggards (scored less than E) in climate regulation readiness according to InfluenceMap.
Severe Environmental Damage	Identifies companies which meet NBIM exclusion for "Actions or omissions that constitute an unacceptable risk of the Fund contributing to severe environmental damages".
Thermal Coal	Identifies companies which derive at least 30% of revenue or power generation from thermal coal as provided by Oxford Smith School, supplemented by corporate financial disclosures.
Tropical Deforestation	Identifies laggards (scored zero or 1) on stopping tropical deforestation, according to Forest 500 by the Global Canopy Programme.
For-Profit Prison	Identifies companies which own or operate private prisons according to FactSet RBICS and two aggregated private prison divestment lists, from American Friends Service Committee (Quaker) and Enlace International's National Private Prison Divestment Campaign.
Repressive Regime	Identifies companies which derive at least 5% of their revenue from countries listed as "worst of the worst" by Freedom House.
Global Compact Principles Violators	Companies identified by RepRisk Global Compact database with a "VIOLATOR_OPERATIONS" flag under either of human rights, labour, environment or anti-corruption themes.
Gambling	Identifies companies which earn more than 5% of revenue from gambling using FactSet's RBICS.
Pornography	Companies classified by "Adult Entertainment" by at least one of the cohort of large pension funds with exclusion lists that Corporate Knights monitors.
Excess of Conventional over Clean Energy Financing	Based on Bloomberg BNEF data and/or corporate disclosures. Companies who sum of conventional energy financing exceeds new energy financing are removed.
Freedom of Expression and Privacy on the Internet	Based on Ranking Digital Rights, companies that do not score in the top quartile within their categories are excluded.
Child/Forced Labour	Source: Know the Chain. Companies which scored in bottom quartile of Know the Chain rating are removed.

# Appendix IV: Corporate Knights Notice and Disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the “Information”) is the property of Corporate Knights Inc. known herein as “Corporate Knights” and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or disseminated in whole or in part without prior written permission from Corporate Knights.

The Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other Corporate Knights data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. CORPORATE KNIGHTS DOES NOT MAKE ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF).

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of Corporate Knights equity indexes or stock lists are listed companies, which are included in or excluded from the indexes or lists according to the application of the relevant methodologies. Accordingly, constituents in Corporate Knights equity indexes or lists may include Corporate Knights, clients of Corporate Knights or suppliers to Corporate Knights. Inclusion of a security within a Corporate Knights index or list is not a recommendation by Corporate Knights to buy, sell, or hold such security, nor is it considered to be investment advice.

Corporate Knights receives compensation in connection with licensing its indexes to third parties. Corporate Knights Inc.’s revenue includes fees based on assets in Index Linked Investments.

Any use of or access to products, services or information of Corporate Knights requires a license from Corporate Knights. Corporate Knights brands and product names are the trademarks, service marks, or registered trademarks of Corporate Knights and its subsidiaries in Canada, United States and other jurisdictions.