

# Global Infrastructure Income Smart Beta Index Methodology

(Applied to PGS Proprietary Universe and PICS)

#### 2019

# Universe of eligible listed equities and partnerships

- The GII Smart Beta Index ("the Index") defines infrastructure assets as the physical structures and networks upon which the operation, growth, and development of a community depends including electric and water/waste utilities, renewable power generation, telecommunications, toll roads, midstream energy infrastructure storage, transportation and gathering & processing, LNG services; railroads, airports, ports, and logistics; social infrastructure including health care facilities, educational facilities and housing, correctional facilities, courthouses, and exchanges; technology infrastructure including platforms, cloud-based services, datacenters, data processing & outsourced services.
- Eligible Equities that are in the PICS Level 2 Sub-Industry names: Airports, Chips, Cloud, Communications REITS, Diversified Midstream Energy, Diversified, Diversified Telecom, Diversified Utility, Electricity & Gas Marketing & Trading, Electricity Networks, Equipment, Exchanges, Freight, Gas Distribution, Generation & Transmission, Generation, Transmission, & Distribution, Hospital Network, LNG Export, LNG/NG Midstream, Logistics, Miscellaneous REITS, Natural Gas & Liquids Infrastructure, Natural Gas & Power, Natural Gas Midstream, Passenger, Payment Systems, Petroleum Storage, Platform, Power Generation, Power Generation & Distribution, Ports, Renewable Finance, Renewable REIT, Renewable Utility, Software Infrastructure, Technology REITS, Telecom & Media, Toll Roads, Transmission, Wireless, and Yieldco.

Rules for constituent selection for sectors may apply additional Levels of PICS hierarchy, according to the methodology described in this document.

Eligible equities also include Closed End Funds (CEFs) (LSE listed) that hold and manage diversified infrastructure assets.

The minimum market cap to be eligible at annual rebalance is US\$1 billion, with the exception of the MLP sector constituents where the minimum is US\$2 billion. The minimum 3 month US\$ trading value at time of rebalance is US\$2,000,000, with the exception of the MLP sector where the minimum is \$10,000,000.

- The Index includes 11 PICS Level 1 Sectors (defined by the Index provider):
  Airports & Ports, Communications, Diversified & Logistics, Energy C-corps,
  Miscellaneous, MLPs (Master Limited Partnerships), Power, Railroads,
  Renewable Power Generation, Technology Infrastructure and Water Utilities.
  - Sectors are equally weighted.
  - Sectors are rebalanced annually.
  - Equities are assigned to a sector based on the type of infrastructure assets owned and/or operated and/or financed.
    - Miscellaneous includes infrastructure equities that do not fit into the other sectors listed above (Toll Roads, Hospital Networks, Exchanges, and <u>Miscellaneous</u> REITS including correctional facilities, healthcare, and student housing).
    - Diversified & Logistics includes equities that are logistics companies or companies that have multiple forms of infrastructure businesses, including holding companies, Trusts, CEFs, and listed partnerships (excluding energy MLPs).
- Equities are equally weighted within each sector and include an additional liquidity filter. Prior to annual rebalance, as of the first business day of December prior to rebalance, weights are determined based upon the previous 3 month average daily value of the equity traded according to the following parameters:
  - = or >US\$18 million = full weight.
  - <US\$18 to US\$10 million = 50% weight.</li>
  - <US\$10 million = 25% weight.</li>
  - Eligible IPOs during the calendar year are added at the next annual rebalance.
  - If a constituent is acquired during the annual period, it is removed from the sector and its allocation is proportionally allocated to the remaining constituents in that sector, unless it is acquired by a constituent, in which case the acquirer's allocation is increased by the allocation of the acquired constituent. If the constituent is acquired by a constituent in another sector in the Index, the acquired constituent is removed from



- the sector and its allocation is proportionally allocated to the remaining constituents in the sector.
- The maximum allocation to a constituent shall not exceed 10%. The sum of constituents with an allocation of 5% or higher shall not exceed 40%.
- The allocation to listed infrastructure RICs/CEFs or equivalent shall not exceed 5%.
- All metrics applied for constituent selection are measured as of the first US business day in December ("Measurement Date") prior to the annual rebalance.
- Index includes a local currency terms version and a USD version. For the USD version, index methodology assumes no hedging of non-USD currencies.

Methodology for Determining Eligible Equity and Partnership Universe and **Constituent Selection by Infrastructure Sector** 

## **Airports & Ports**

# **Definition:**

Airports & Ports Sector includes listed equities involved in the development, ownership, leasing, operation, management, concessions or servicing of airports and related facilities. The Sector also includes listed equities involved in the development, ownership, leasing, operation, management, concessions or servicing of ports and related facilities.

# Universe includes PICS Level 2 "Airports."

Select the largest market cap listed in each of Hong Kong (H-shares only), New Zealand, Singapore, Switzerland, France, Spain, Australia, Germany, UK, and Japan. Select the largest two market caps listed in Mexico.

## Universe includes PICS Level 2 "Ports."

Select the largest market cap listed in each of UAE, Hong Kong (H-shares only), and Singapore.

## Communications

## **Definition:**





Communications Sector includes listed equities involved in the development, ownership, leasing, operation, management, or servicing of telecommunications networks including fiber optics, wired and/or wireless, cell towers, and satellites.

Universe includes PICS Level 2 "Wireless."

Select largest market cap listed in each of Hong Kong (H-shares only), Germany, UK, Spain, and the US. Select the largest three market caps listed in Japan.

Universe includes PICS Level 2 "Telecom & Media."

Select largest two market caps listed in the US and the largest market cap listed in Canada.

Universe includes PICS Level 2 "Diversified Telecom."

Select the largest market cap listed in each of the US, France, UK, and Japan.

Universe includes PICS Level 3 "Cell Towers."

Select the two largest market caps listed in the US.

Universe includes PICS Level 3 "Fiber Optic Lines."

Select largest market cap listed in the US.

**Diversified & Logistics** 

## **Definition:**

Diversified & Logistics Sector includes listed equities that are involved in the development, ownership, leasing, operation, management, concessions or servicing of multiple forms of infrastructure assets (i.e. airports and toll roads), or listed equities that are involved in the pickup and delivery of packages, cargo, and freight; storage and warehousing, and global supply chain services; or waste management services (that are not water utilities).

Universe includes PICS Level 2 "Diversified" and PICS Level 2 "Logistics."

Universe includes PICS Level 3 "CEFs" (holding diversified infrastructure assets).

Select the two largest market caps listed on the LSE.

Universe includes PICS Level 3 "Air Trucking & Freight."



Select the two largest market caps listed in the US and the largest market cap listed in Japan.

Universe includes PICS level 3 "Diversified."

Select largest cap listed in Australia.

Universe includes PICS Level 3 "Holding Company."

Select the two largest markets cap listed in Hong Kong (H-Shares only) and the largest market caps in each of the US and Canada.

Universe includes PICS Level 3 "Construction."

Select the largest market cap listed in each of Spain, the UK, and France.

Universe includes PICS Level 3 "Postal."

Select largest the market cap listed in each of the UK, Germany, and Japan.

Universe includes PICS Level 3 "Trucking."

Select the largest market cap listed in the US.

## **Energy C-Corps**

## **Definition:**

Energy C-Corps Sector includes listed equities that are involved in the development, ownership, leasing, operation, management, concessions, or servicing of midstream energy assets or serve as general partner to one or more MLPs in the midstream or downstream energy infrastructure space. Equities whose primary business is shipping transportation are excluded with the exception of LNG shipping from the US which is included.

Universe includes equities listed in the US, Canada, Hong Kong (H-shares only), Spain, Italy, Japan, Australia, and the Netherlands.

Universe includes equities in PICS Level 2 "Diversified Midstream Energy."

Select largest three market caps listed in the US; select the largest three market-caps listed in Canada.

Universe includes PICS Level 2 "LNG Export."

Select the largest market cap listed in the US.

Universe includes PICS Level 2 "Natural Gas & Power."

Select the largest market cap listed in Canada.

Universe includes PICS Level 2 "Natural Gas Midstream."

Select the largest market cap listed in each of Italy, the US, and Australia.

Universe includes PICS Level 2 "Gas Distribution."

Select the largest market cap listed in each of Hong Kong (H-shares only) and Japan.

Universe includes PICS Level 2 "Petroleum Storage."

Select the largest market cap in the Netherlands.

Equities whose primary business is Exploration & Production or Power Generation are excluded from Energy C-Corp Universe.

If an equity is listed in both of the US and Canada, the Index will include the more liquid listing based on the previous 90 days' value traded on the first business day of December prior to the annual rebalancing.

Derivative company structures are not eligible; for example a company set up to own shares of one other company. (To be clear on this last exclusion, ADRs are eligible to be included in the universe and the Index).

#### Miscellaneous

# **Definition:**

Miscellaneous Sector includes listed equities involved in the development, ownership, leasing, operation, management, concessions or servicing of social infrastructure including Exchanges, student housing, correctional facilities, healthcare facilities, and related facilities; and transportation infrastructure including toll roads and related facilities.

Universe includes PICS Level 2 "Exchanges."

Select the four largest market caps listed in the US. Select the largest market cap listed in each of the UK, Germany, Hong Kong (H-shares only) and Japan.

Universe includes PICS Level 2 "Hospital Network."

Select the two largest market caps listed in the US and the largest market cap in Australia.

Universe includes PICS Level 3 "Student Housing."

Select the largest market cap listed in the US.

Universe includes PICS Level 3 "Correctional Facilities."

Select two largest market caps listed in the US.

Universe includes PICS Level 2 "Toll Roads."

Select two largest market caps listed in Australia. Select the largest market cap listed in Italy.

Universe Includes PICS Level 3 "Healthcare."

Select the three largest market caps listed in the US.

#### **MLPs**

# **Definition:**

MLPs Sector (Master Limited Partnerships) includes public partnerships that are listed on a US exchange. The Index includes energy midstream and downstream MLPs. Midstream MLPs may gather, process, transport, and store oil, natural gas, natural gas liquids and refined petroleum products. Downstream MLPs engage the distribution of propane and/or other refined products.

The Universe includes Master Limited Partnerships that are listed on a US exchange. Eligible MLP sub-sectors, using the MLP Association Listing at <a href="https://www.MLPassociation.org">www.MLPassociation.org</a>, Oil and Gas: Midstream, Downstream, and Propane.

Eligible MLPs must have minimum market cap of US\$2 billion, minimum free float of US\$1.5 billion, minimum average daily value traded US\$10 million over the most recent 90 days, and currently pay a distribution.

For eligible MLPs, calculate the average of the quarter over quarter distribution growth for the past 8 quarters. Next, rank the MLPs from highest to lowest distribution growth rate. The 10 MLPs with the highest average growth rates are the constituents for the MLPs Sector.



#### **Power**

# **Definition:**

Power Sector includes diversified utilities and transmission utilities. Gas utilities are not included.

Universe includes PICS Level 2 "Diversified Utilities."

Select the twelve largest market caps listed in the US. Select the largest market cap listed in each of Australia, Canada, France, Hong Kong (H-shares only), Italy, Japan, and the UK.

Universe includes PICS Level 2 "Transmission."

Select largest market cap listed in each of Italy and Spain.

Universe includes PICS Level 2 "Generation & Transmission."

Select largest market cap listed in each of France and Spain.

Universe includes PICS Level 2 "Generation, Transmission & Distribution."

Select two largest caps listed in the US.

Universe includes PICS Level 2 "Electricity & Gas Marketing & Trading."

Select the largest market cap listed in Denmark.

Universe includes "Electricity Networks."

Select the largest market cap listed in Germany.

Universe includes "Power Generation."

Select the largest market cap listed in Germany.

## Railroad

# Definition:

Railroad Sector includes listed equities involved in the development, ownership, leasing, operation, management, concessions or servicing of passenger or cargo railroads, (including railroads with intermodal transportation), and related facilities.

Universe includes PICS Level 2 "Freight."



Select the four largest market caps listed in the US, the two largest market caps listed in Canada, and the largest market cap in Australia.

# Universe includes PICS Level 2 "Passenger."

Select the three largest market caps listed in Japan. Select the largest market cap listed in each of France and Hong Kong (H-shares only).

# **Renewable Energy**

## **Definition:**

Renewable Energy Sector includes listed equities involved in the *development*, ownership, leasing, operation, management, concessions or servicing of renewable energy infrastructure including solar, wind, hydro, thermal power, and/or biomass.

Universe includes PICS Level 2 "Renewable Utility."

Select the largest market cap listed in Canada.

Universe includes PICS Level 2 "Yieldco."

Select the largest five market caps listed in the US and the largest 6 market caps listed in Canada.

Universe includes PICS Level 2 "Renewable Finance."

Select largest market cap listed in the US.

Universe includes PICS Level 2 "Power Generation & Distribution."

Select the largest cap listed in each of the UK, Germany, and Hong Kong (H-shares only).

All constituents must pay a dividend or distribution.

# **Technology Infrastructure**

# **Definition:**

Technology Sector includes US listed equities involved in the development, ownership, leasing, operation, management, or servicing of technology, hardware, software,



networking, cloud, consulting, communications hardware, financial transactions, and e-commerce.

Universe includes PICS Level 2 "Software Infrastructure."

Select largest four market caps listed in the US.

Universe includes PICS Level 2 "Platform."

Select the five largest market cap listed in the US. Select the largest cap listed in Hong Kong (H-shares only).

Universe includes PICS Level 2 "Technology REITS" and PICS Level 3 "Datacenters."

Select the four largest market caps listed in the US.

Universe includes PICS Level 2 "Payment Systems."

Select two largest market caps listed in the US.

## Water

#### **Definition:**

Water Sector includes listed equities that are water utilities. These companies are involved in the development, ownership, leasing, operation, management, servicing, or delivery of water, water and waste services, and related facilities.

Select four largest market caps listed in the US, the three largest market caps listed in the UK, the two largest market caps listed in Hong Kong (H-shares only), the largest market cap listed in France and the largest market cap listed in Brazil.

