innogy’s Green Bond Proceeds Allocated to Grid Business
11 February 2020
Green Bond proceeds allocated to DSO projects

- DSO investments in the following categories qualify as eligible under innogy’s GBF¹:
  1. Investments to connect renewables
  2. Grid investments due to Energiewende
  3. Smart meter investments

- Total investment potential identified: ~€1.7 bn for the period 2014 – 2018.²

- innogy’s Green Bond proceeds of €850m are allocated to capex spending in the following categories i, ii and iii (between 2014 and 2016).

Terms and conditions

- Launch date: 12 October 2017
- Issuer: innogy Finance BV
- Guarantor: innogy SE
- Issue ratings: A-/Baa2/BBB (F/M/S&P)
- Format: DIP; senior, unsecured green bond
- Second Opinion: Sustainalytics
- Amount: €850 million
- Maturity date: 19 October 2027
- Coupon: 1.25%
- Structural advisors: ABN AMRO, Société Générale
- Bookrunners: DZ-Bank, HSBC, LBBW, MUFG

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¹ GBF = Green Bond Framework
² See Appendix
Distribution System Operators are the enabler of the Energiewende (Energy Transition)
External review: Sustainalytics Assurance Letter

Sustainalytics evaluated the compliance of the Distribution System Operator (DSO) projects with the eligibility criteria defined in innogy’s Green Bond Framework this in an assurance letter ¹:

“The innogy’s eligible assets, (re)financed either by existing outstanding green bond or by future issuances, can be related to the following three eligible categories:

(i) Investments to connect renewables (above 30 kW) to the grid
(ii) Grid investments due to Energiewende, i.e. investments in the grid to cope with more and more fluctuating feed-in from renewables as well as consumption of electricity. innogy has confirmed to Sustainalytics that they will only count 50% of grid investments as eligible to allocate to green bond proceeds.
(iii) Smart meter investments.

These types of investments are part of the eligible projects as defined in the 2017 GBF and are in line with the Green Bond Principles. In addition, Sustainalytics considers the listed types of expenses as contributing to the transition of energy systems towards renewable and low carbon energy.”

Limited Assurance by PWC for Green Bond allocation

Appendix
(i) Investments to connect renewables

> Investments in grid connections with renewable capacities above 30 kW (e.g. onshore wind farms), as defined under the Renewables Energy Act (EEG) 2017 §8.

> Connections encompass power lines but also further network operations related infrastructure such as substations.

> Investments can be directly assigned to new build projects for renewable plants.

**KPI:**

> See category (ii), p.10
(ii) Grid investments due to Energiewende

> Investments to increase flexibility in grid infrastructure, allowing it to cope with increased renewables feed-in fluctuation as well as consumption of electricity.

> Guarantee the technical availability of the network: Optimisation of existing distribution grid through smart replacement investments.

> Grid investments to connect prosumers, heat pumps or charging stations for electric cars. Investments in smart technology driven by digitalisation and innovative solutions.

We assume that at least 50% of total grid investments are eligible for Green Bonds (see next pages).
(ii) Why we consider 50% as Green Bond eligible (a)

In its traditional role, the DSO grid only distributes electricity to consumers which is received from the TSO grid. The TSO grid is supplied by large-scale generation, i.e. conventional generation, but also increasingly by offshore wind and biomass co-firing. The total peak load capacity of all consumers connected to our grid is around 22 GW (2017 figures).

Due to the Energiewende and especially the boom in decentral generation, the grid now has a new function. This is to enable the feed-in and transport of decentralised renewable electricity production as well as to manage its volatility. In total, we currently have around 23.5 GW (2017 figures) renewables generation capacity directly connected to our grid, with a clear upward trend. Furthermore, intermittent renewable electricity from TSO or other DSO grids is transported via our distribution network.

1 Renewables capacity directly connected to innogy’s grid has increased from around 18 GW in 2013 to 23.5 GW in 2017, whereas peak load capacity has been slightly decreasing over this period of time.
(ii) Why we consider 50% as Green Bond eligible (b)

> Peak capacity, irrespective of whether from the supply or demand side, is the main driver for investments in the grid. Therefore, capacity is the relevant key to judge if investments are made in the context of the Energiewende.

> In our grid, the directly connected renewables generation capacity ("Energiewende function") is in the magnitude of connected peak load capacity of consumers ("traditional function"). This is why we assume, that about 50% of innogy’s grid investments are Green Bond eligible. It is even conservative, as we neither consider necessary Energiewende investments on the demand side (e.g. upgrade of grid due to EV charging stations) nor the renewables feed-in from other grids in this ratio of 50%.

**KPI:**

> Calculation of CO\textsubscript{2} avoidance based on renewables generation of directly connected capacity. A specific CO\textsubscript{2} emissions factor of 0.489 t CO\textsubscript{2}/MWh is assumed.\textsuperscript{1}

\textsuperscript{1} See https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2018-05-04_climate-change_11-2018_strommix-2018_0.pdf
Identified investment potential to (i) connect renewables and for (ii) Energiewende of above €1.1 bn

\[ \text{i = Investments to connect renewables, above 30 kW} \]
\[ \text{ii = Grid investments due to Energiewende} \]

<table>
<thead>
<tr>
<th>Year</th>
<th>Investments</th>
<th>Renewables capacity</th>
<th>Capacity additions of renewables &gt; 30 kW</th>
<th>Renewables production</th>
<th>CO$_2$ avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>€ millions</td>
<td>GW</td>
<td>GW</td>
<td>TWh</td>
<td>million tonnes CO$_2$</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td>294</td>
<td>19,5</td>
<td>29,5</td>
<td>14,4</td>
</tr>
<tr>
<td></td>
<td>thereof i</td>
<td>88</td>
<td></td>
<td></td>
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<tr>
<td>2015</td>
<td></td>
<td>307</td>
<td>20,5</td>
<td>34,7</td>
<td>16,9</td>
</tr>
<tr>
<td></td>
<td>thereof i</td>
<td>73</td>
<td></td>
<td>1,6</td>
<td>0,8</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td>271</td>
<td>21,9</td>
<td>33,2</td>
<td>16,2</td>
</tr>
<tr>
<td></td>
<td>thereof i</td>
<td>67</td>
<td></td>
<td>1,4</td>
<td>1,0</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td>311</td>
<td>23,5</td>
<td>37,9</td>
<td>18,5</td>
</tr>
<tr>
<td></td>
<td>thereof i</td>
<td>88</td>
<td></td>
<td>1,5</td>
<td>1,3</td>
</tr>
<tr>
<td>2014 - 2017</td>
<td>Total i &amp; ii</td>
<td>1.184</td>
<td>294</td>
<td>19,5</td>
<td>29,5</td>
</tr>
<tr>
<td></td>
<td>thereof i</td>
<td>316</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Total renewables capacity directly connected to innogy’s DSO grid.
2 Total renewables production based on directly connected renewables capacities.
(iii) Identified smart meter capex in Germany around €86 m

> Smart meters give customers the information/transparency about their energy consumption and support the efficient use of energy.

> More efficient use of energy is a crucial element for the successful implementation of the Energiewende.

KPI:

> Potential CO₂ avoidance based on: an assumed average consumption of 3.5 MWh/a per customer¹, a specific CO₂ emissions factor of 0.489 t CO₂/MWh² and an expected consumption reduction of 1.0%³.

### iii = Smart meter investments

<table>
<thead>
<tr>
<th>Year</th>
<th>Investments</th>
<th>CO₂ avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>€ millions</td>
<td>kilo tonnes CO₂</td>
</tr>
<tr>
<td>2016</td>
<td>43</td>
<td>4,8</td>
</tr>
<tr>
<td>2017</td>
<td>43</td>
<td>4,8</td>
</tr>
<tr>
<td>2016 - 2017</td>
<td>86</td>
<td></td>
</tr>
</tbody>
</table>

1 Conservative assumption as it represents the average demand of a German household.
innogy’s Green Bond Framework follows the Green Bond Principles\(^1\)

<table>
<thead>
<tr>
<th>1. Use of Proceeds</th>
<th>2. Project evaluation and selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Bonds are exclusively used to finance or refinance(^2) Eligible (Green) Projects of the following three categories:</td>
<td>• Business units propose projects and provide information.</td>
</tr>
<tr>
<td>✓ Renewable energy projects</td>
<td>• The Green Bond Committee(^3) (GBC) verifies and finally selects Eligible Projects.</td>
</tr>
<tr>
<td>✓ Energy efficiency projects</td>
<td></td>
</tr>
<tr>
<td>✓ Clean Transportation projects</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Internal monitoring of the Eligible Projects and tracking of the outstanding proceeds.</td>
<td>• Prior to issuance of each bond, disclosure of relevant Eligible Projects and expected climate and environmental impact.</td>
</tr>
<tr>
<td>• In case of divestment/cancellation reallocation to other Eligible Projects.</td>
<td>• Annual reporting of the following information:</td>
</tr>
<tr>
<td>• Unallocated proceeds will be invested in e.g. money market products and/or marketable securities.</td>
<td>• The total amount of proceeds allocated</td>
</tr>
<tr>
<td></td>
<td>• The amount of unallocated proceeds (if any)</td>
</tr>
<tr>
<td></td>
<td>• Climate and/or environmental benefits</td>
</tr>
</tbody>
</table>

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2 Disbursements not earlier than 2014.

3 The GBC consists of representatives from Corporate Responsibility, Treasury, and on case by case basis members of business units involved.
innogy’s Green Bond process at a glance

Green Bond Framework

innogy’s Executive Board
authorises mission, members, rules of procedures

Green Bond Committee (GBC)
Corporate Responsibility, IR, Treasury, Business unit(s)

Green Bond
Eligible Projects financed

Eligible Projects
GBC will approve Eligible Projects and allocate these to Green Bond proceeds

Reviewed by Sustainalytics

Limited assurance on allocation of proceeds by auditors

Periodic reporting to investors

Business units suggest projects
communicate with trust.
be bondholder value.
investor relations.