

Materiality Analysis 2020

Stakeholders' expectations

Vattenfall Corporate Sustainability

Confidentiality class: C1 – Public



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VATTENFALL

Preface

We want to make fossil free living possible within one generation, and we are driving the transition to a sustainable energy system. To succeed, we need to understand what our stakeholders' expectations are on our strategy, results, and ambitions now and in the future.

Engaging with our stakeholders in a constant dialogue helps us learn what they consider important, what is expected from us, and in turn to find suitable solutions, gain acceptance and make the best decisions possible.

The so called 'Materiality Analysis' is an important process to engage with our key stakeholders to get their views on what they consider the most important topics for Vattenfall to focus on and where they feel Vattenfall has the biggest impact on society, environment and the economy. The results help us shape our strategic focus areas to ensure we meet the expectations of our stakeholders moving forward.

Between May and June 2020, over 2900 stakeholders from Vattenfall's main markets¹ have rated the most material topics based on both importance and significance of impact



Annika Ramsköld, Vice President Corporate Sustainability

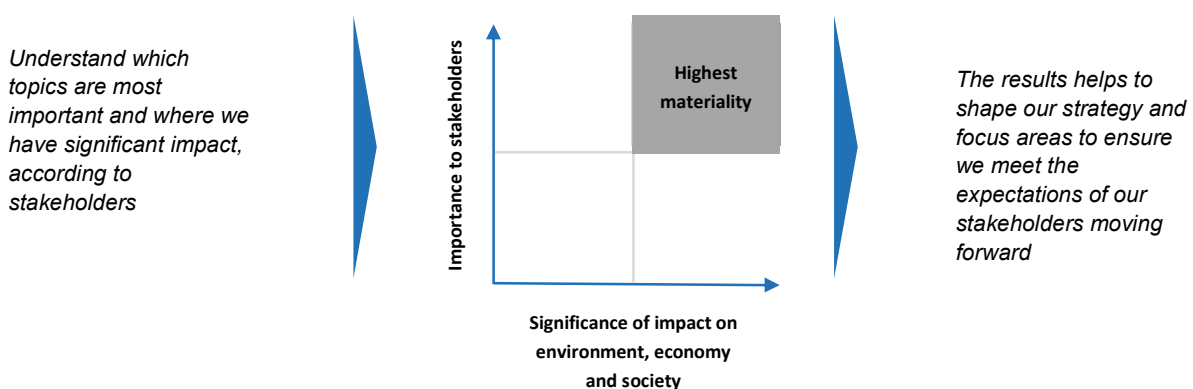


¹ Denmark, Finland, Germany, Netherlands, Sweden, UK, France

1. What is a materiality analysis?

A materiality analysis is a methodology for engaging stakeholders to identify and prioritize sustainability topics relevant to both the business and its stakeholders.

Vattenfall applies this methodology by asking our stakeholders which topics are most important to them, and where they feel Vattenfall has the biggest impact on the environment, society and economy. Those topics which are ranked highest in importance and impact are the most material topics. The results are used as input for our strategy, Annual & Sustainability Report and continued dialogue with our stakeholders.



In this year's edition of the materiality analysis process, we added a question around **COVID19**, and if it impacts the expectations of our stakeholders on us.

2. Who took part in the survey?

Between May and June 2020, over 2900 people (including ~ 500 employees) from all stakeholder groups on Vattenfall's main markets took part in the dialogues through various channels:



Consumer panels in Sweden, Germany and the Netherlands, ~2300 representatives



Interviews with representatives in Sweden, Germany, the Netherlands, Denmark, the UK and France ~40 representatives



Survey on intranet, corporate websites, and in social media in Sweden, Finland, Germany, the Netherlands, the UK, Denmark, >550 participants



Targeted **emails** sent to key stakeholders

The number of respondents per stakeholder groups looks as follows:



And division of respondents per market:

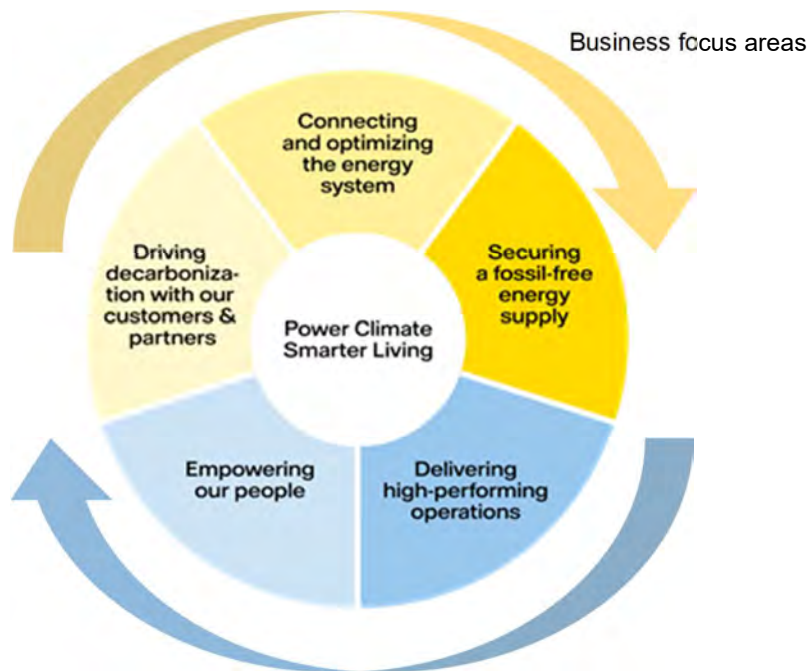


3. Results

3.1. Vattenfall's strategy

As stated in the preface, we perform the materiality study to understand stakeholders' expectations, in order to be successful in realizing our ambitions and executing our strategy.

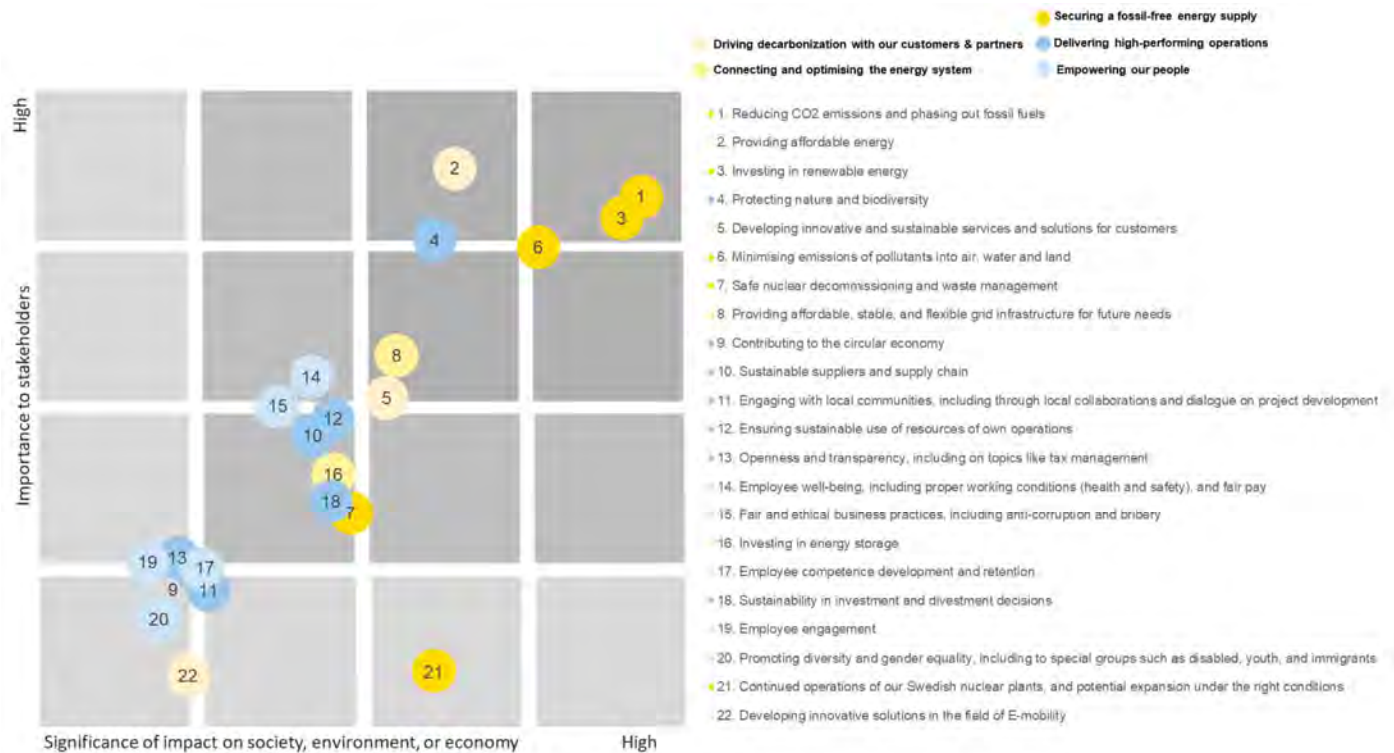
Vattenfall's ambition is to become fossil-free within one generation. To make fossil-free living a reality, we are transforming our production portfolio and helping our customers power their lives in climate smarter ways. Our strategy is based on five strategic focus areas: driving decarbonisation with our customers & partners, connecting and optimising the energy system, securing a fossil-free energy supply, delivering high-performing operations and empowering our people.



All topics in the materiality analysis are connected to one of these five pillars. As one can see in the materiality matrix in the following section, the topics which are ranked most material are connected to the business focus areas, while topics which are seen as enablers and hygiene are connected to empowering our people and delivering high-performing operations.

3.2. Materiality matrix 2020

The result of the materiality analysis 2020 is displayed in the matrix below. The most material topics are the topics in the top right corner and are ranked highest in both importance and significance of impact on society, environment or economy, by our stakeholders. The colour of the topics connects the topic with one of the five strategic focus areas.



From the feedback of over 2900 stakeholders, the following **seven 'material' topics** emerged:

- Reduce CO₂ and phase out fossil fuels
- Provide affordable energy
- Invest in renewable capacity
- Protect nature and biodiversity
- Develop innovative and sustainable solutions for customers
- Minimise emissions of pollutants to air, water and land
- Provide affordable, stable and flexible grid infrastructure

With regards to **COVID 19**, 85% of the respondents indicated that COVID 19 has no impact on their expectations on Vattenfall.

3.3. Materiality results 2020 versus 2018



When we compare the results from the 2020 materiality analysis to the 2018 results, the following can be concluded:



'Protecting nature and biodiversity' (4) and 'minimising emissions of pollutants into air, water and land' (6) have become **more material**



'Providing affordable energy' (2), 'Reducing CO2 emissions' (1) and 'Increase renewables' (3) remain **key material** topics



'Providing affordable, stable and flexible grid' (8) and 'Developing new services and solutions' (5) remain **important material** topics







'Safe nuclear decommissioning' (7) is **no longer** in top 8 most material topics

3.4. Top three importance at group level: core markets and stakeholder groups

For Vattenfall's **core markets**, the top three of **important** topics according to our stakeholders looks as follows:










(...) 2018 rank

Topics	 # 991	 #991	 #896
 Providing affordable energy	4 (2)	1 (1)	1 (1)
 Investing in renewables		2 (2)	3 (3)
 Reducing CO ₂ emissions	2 (1)	3 (3)	2 (2)
 Minimising emissions	1 (8)	2 (10)	
 Protecting nature & biodiversity	3 (3)		

- In this report, responses from Denmark/Finland/UK have been incorporated in group statistics; Although number of responses UK >15, stakeholder representation was unbalanced, therefore difficult to provide representative picture.
- Difference between top 2-4 is very small in Sweden

The table below shows the top three most **important** topics per **stakeholder** group.

(...) 2018 rank

Topic	BtB #86	BtC #714	Employee #495	General public #1442	Supplier #47
 Providing affordable energy	1 (1)	1 (1)		1 (1)	
 Investing in renewables		3 (3)	3 (3)	2 (3)	1
 Reducing CO ₂ emissions		2 (2)	1 (1)		2
 Protecting nature and biodiversity		4* (4)		3 (4)	
 Sustainable supply chain					3
 Fair and ethical business practices	2 (8)				
 Employee well-being			2 (2)		
 Sustainable use of resources	2 (8)				
 Investing in energy storage	3 (1)				

- Included are also topics which scores deviate <2% than the top 3 listed topics. This was only the case for customer (private).
- Minimising emissions, not in top 3 stakeholder groups; however, #4 and #5 for BtC, general public and employees. As these groups are high in number, minimizing emissions in overall top 7.
- Employee well-being not in top 7 material topics, as importance to employees is high while impact is average. This table looks at importance only








3.5. Feedback from interviews

In addition to the online survey and consumer panels, Vattenfall performed 40 interviews with internal and external stakeholders. The interviews provided the project team a bit more room for dialogue and deeper understanding of expectations of key stakeholders on us. Below a selection of key feedback.



3.6. Material topics and the Sustainable Development Goals (SDG's)

Vattenfall identified the six SDGs to which we make the greatest global contribution. The seven most material topics identified by stakeholders, **confirm** that these six remain relevant, as each topic impacts a number of the identified goals. Our core strategy and operations continue to be aligned with the areas in which Vattenfall can have the greatest impact as a company.

		7 AFFORDABLE AND CLEAN ENERGY	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	17 PARTNERSHIPS FOR THE GOALS
 Reduce CO ₂							
 Increase renewables							
 Provide affordable energy							
 Protect nature & species							
 Develop sustainable solutions							
 Minimize non-CO ₂ emissions							
 Provide affordable & stable grid infrastructure							

3.7. Conclusions

Based on the feedback from the online survey, the consumer panels and the interviews, the following can be concluded:



The top three most important topics for our stakeholders, remains unchanged at group level: CO2 emissions, affordability, and investing in renewables.



Topics connected to business focus areas are ranked more material; while topics linked to empowering people and high performing operations are seen as enablers and hygiene factors.



85% of stakeholders indicated that COVID 19 has no impact on their expectations.



Performance on key topics is between 'average' and 'good'. In addition, Vattenfall's credibility remains high.



Interview respondents highlight importance of public acceptance and engaging with local communities.



Communications about performance, ambitions and proof points remains important



Results of the materiality analysis are confirmed by the *Environmental Outlook 2030*, a study performed by Vattenfall: battling climate crisis and the increase focus on biodiversity are key environmental trends according to the Environmental outlook 2030.

4. APPENDIX

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




1. Breakdown of results & analysis

1.1. Analysis per core market

1.1.1. Sweden – importance to stakeholders



(...) 2018 rank

Topic	BtC #248	BtB #22	Employees #169	General public #483	Suppliers #16 (new)
 Providing affordable energy	1 (1)	1 (1)		2 (1)	
 Reducing CO ₂	2 (2)		1 (1)		3
 Investing in renewables				3 (1)	1
 Protecting nature and species	3 (3)	2 (5)			
 Minimising emissions			3 (13)	1 (7)	
 Continued operations of our Swedish nuclear plants		2			
 Employee well-being			2 (3)		
 Sustainable supply chain					2
 Transparency		3 (18)			
 Developing sustainable solutions					2

Note: Displayed stakeholder groups are those with the highest number of respondents


Overall, the importance of affordability dropped to the fourth position, while minimising (other) emissions is ranked first, according to Swedish stakeholders. That being said, the difference between number 1 to 4 is small.

Responses from business in Sweden differ from other markets, with 'continued operations of Swedish nuclear plants (and potential expansion under the right conditions)' number two.

1.1.2. Germany – importance to stakeholders



(...) 2018 rank

Topic	BtC #222	BtB #42	Employees #200	General public #460	Suppliers #16 (new)
 Providing affordable energy	1 (1)			1 (1)	
 Reducing CO ₂	2 (4)		2 (3)		2
 Investing in renewables				2 (3)	1
 Minimising emissions	3 (13)		3 (17)	3 (10)	3
 Sustainable use of resources		1 (8)			
 Employee well-being			1 (5)		
 Sustainable supply chain					2
 Engaging with local communities		2 (14)			
 Fair and ethical business practices		3 (4)			

Note: Displayed stakeholder groups are those with the highest number of respondents. Employees in Germany in 2020 better represented compared to 2018

In Vattenfall's German market, affordability of supply remains the overall number 1 topic, according to stakeholders.







However, safe nuclear waste handling is still important, but no longer in the top 3 of German employees. Employee well-being is new number 1 topic.

The responses from German businesses show a complete shift from 2018, with sustainable use of resources the new number 1. This is different from other markets.

1.1.3. The Netherlands – importance to stakeholders



(...) 2018 rank

Topic	BtC #243	BtB #20	Employees #88	General public #497	Suppliers #16 (new)
 Providing affordable energy	1 (1)	1 (2)		1 (1)	
 Reducing CO ₂	2 (2)	3 (4)	1 (2)		2
 Investing in renewables	4 (3)	3 (3)	2 (1)	3 (3)	1
 Protecting nature and species	3 (8)	3 (8)		2 (5)	
 Minimising emissions					2
 Employee well-being			3 (6)		3
 Investing in storage		2 (8)			
 Develop sustainable solutions			3 (3)		1

Note: Displayed stakeholder groups are those with the highest number of respondents.

In the Netherlands, affordability is the number one topic for all stakeholder groups. In addition, the gap in importance between affordability and the other topics is substantially bigger than the other markets.

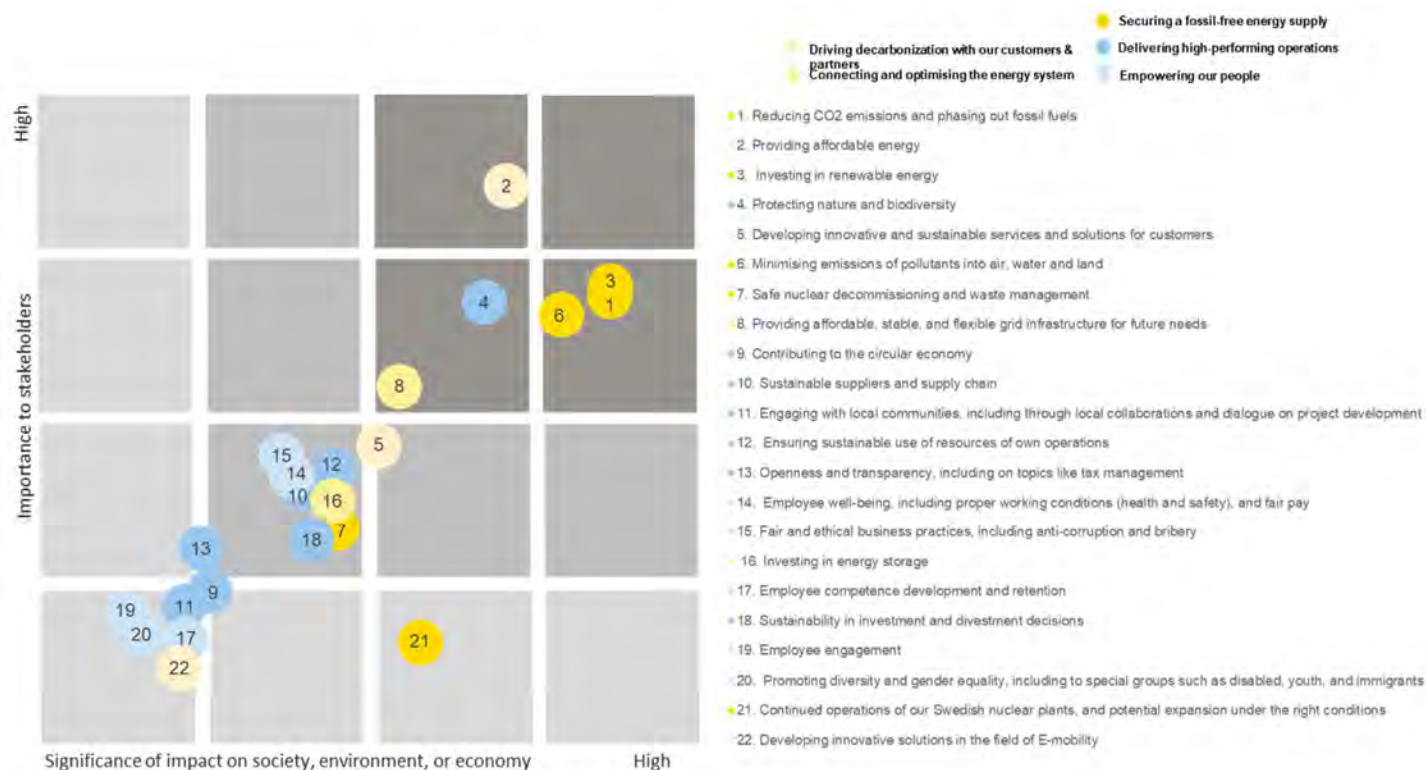
Biodiversity became more important compared to 2018, especially for households and general public.

The business community in The Netherlands responded slightly different from other markets with investing in storage the number 2 topic.

In addition, biomass is a topic of public debate as the sustainability of biomass is being questioned.

1.2. Analysis external versus internal stakeholders

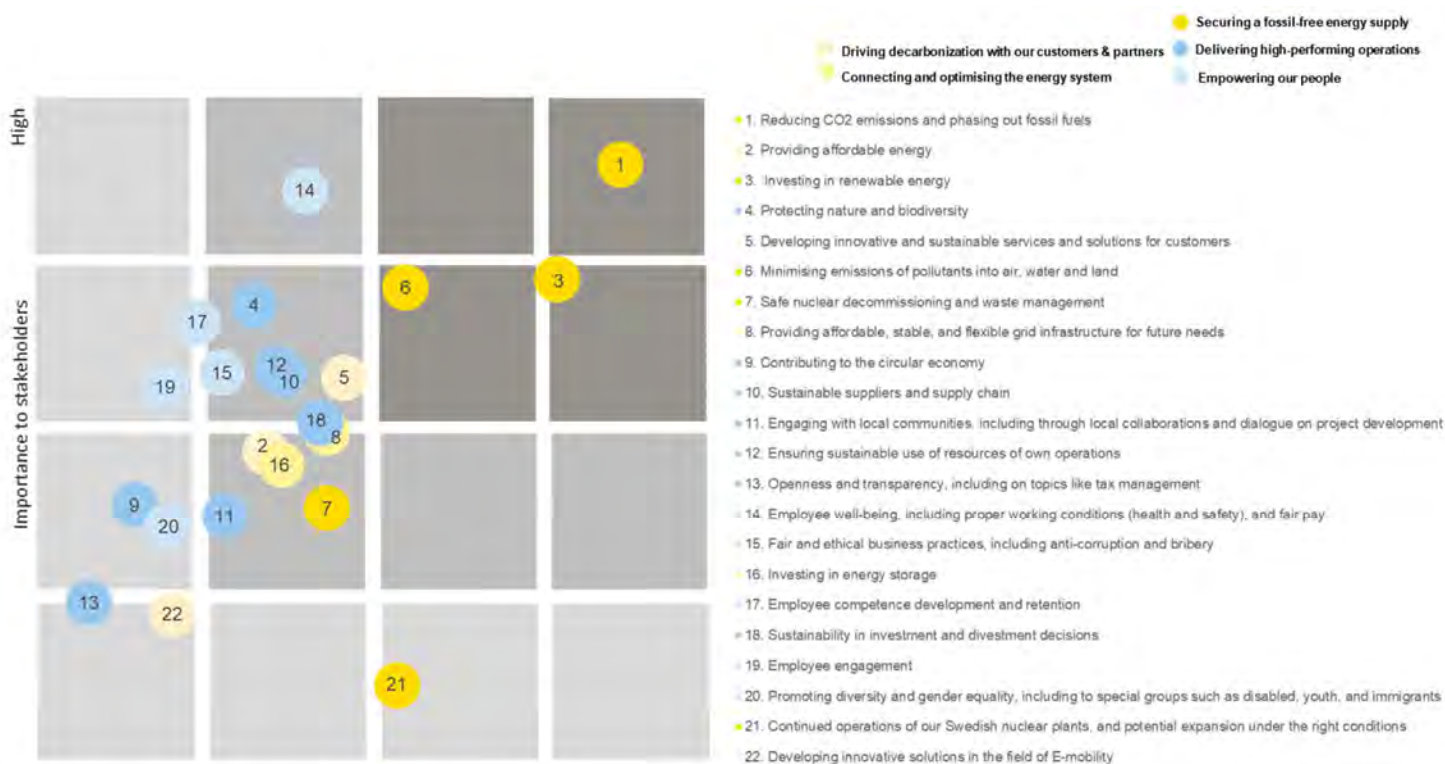
1.2.1. Materiality matrix 2020 – external stakeholders



Looking at external stakeholders only, 'affordability of supply' is ranked as most important to stakeholders, while 'CO2 reduction' and 'investing in renewables' are ranked higher in impact. This is a similar result as in 2018.

'Minimising (other) emissions' and 'protecting biodiversity' are both more material, so ranked higher in importance and impact, according to stakeholders compared to 2018

1.2.2. Materiality matrix 2020 – internal stakeholders



Vattenfall employees (internal stakeholder), rank 'reduce CO2 and phasing out fossil fuels' most important and highest in impact on the environment, society and the economy. 'Investing in renewables' is second highest in impact and remains high in importance. This indicates a full buy-in to our aim of being fossil-free within one generation (as in 2018).

'Employee well-being', is the second most important topic. This topic increased in importance compared to 2018.

As with external stakeholders, employees rank 'minimising (other) emissions', more important in 2020 than in 2018.

1.3. Deep dives on key material topics



In addition to deep dives per market and stakeholder group, in the following section we present deep dives for all seven key material topics.

1.3.1. Providing affordable energy

<div>Overall ranking 2020:</div> <div>1</div> <div>See note 1</div>	<div>Country rankings 2020:</div> <div><div><div>4</div></div><div><div>1</div></div><div><div>1</div></div></div> <div>See note 1</div>	<div>Stakeholder* rankings 2020:</div> <table><tr><td><u>Employees</u></td><td><u>General public</u></td></tr><tr><td>14</td><td>1</td></tr><tr><td><u>B2B customers</u></td><td><u>B2C customers</u></td></tr><tr><td>1</td><td>1</td></tr></table> <div>See notes 1&2</div>	<u>Employees</u>	<u>General public</u>	14	1	<u>B2B customers</u>	<u>B2C customers</u>	1	1
<u>Employees</u>	<u>General public</u>									
14	1									
<u>B2B customers</u>	<u>B2C customers</u>									
1	1									
<div>Importance in comparison to 2018 results:</div> <div><div></div><div>No change</div></div>	<div>Vattenfall's performance:</div> <div>Between 'average' and 'good'</div>	<div>Interview comments:</div> <div>"Need to ensure cost is optimized so everyone can afford a fossil-free society"</div> <div>"A just energy transition!"</div>								
<div>Vattenfall's actions:</div> <div>The costs of the energy transition affects everyone, and Vattenfall is taking steps both upstream and downstream to address this. Upstream, we strive for maximum operational efficiency in our power plants and aim to reduce the costs of renewables for society. An example is wind farm Holland Kust-Zuid, world's largest subsidy-free offshore wind farm. Downstream, we have multiple programs to help low-income or at-risk customers with their energy bills</div>										

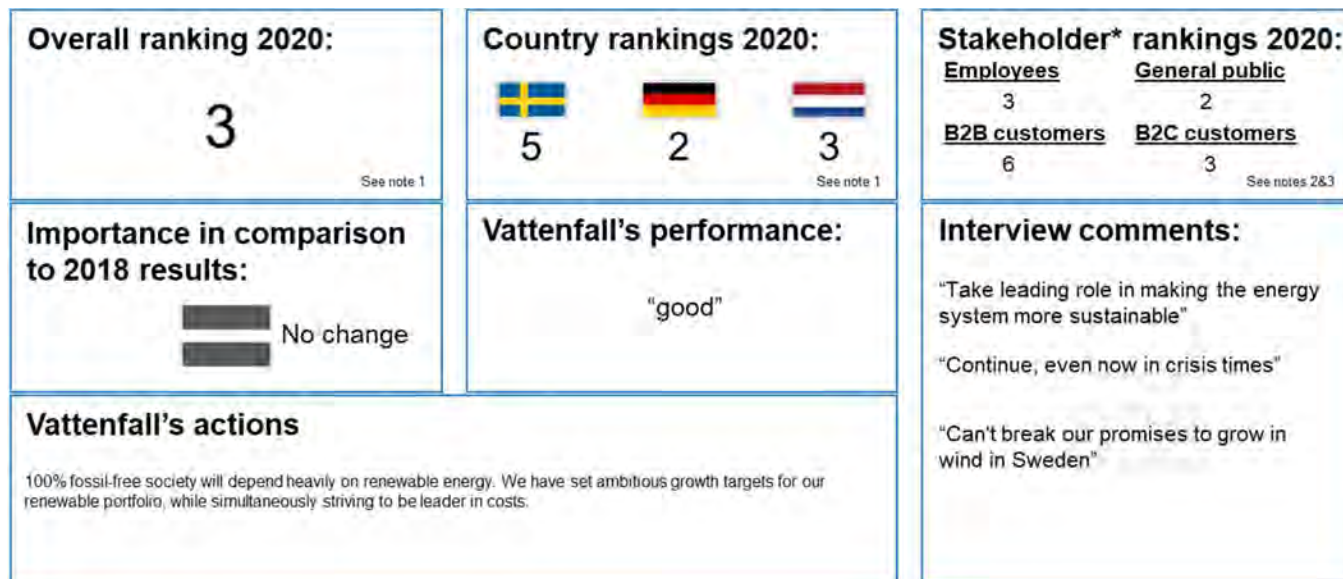
Notes: 1) Based solely on importance; 2) Displayed stakeholder groups are those with the highest number of respondents and at aggregate level across all markets. Ranking across stakeholder groups can vary at country level.

1.3.2. CO2 reduction and phase out of fossil fuels

<div>Overall ranking 2020:</div> <div>2</div> <div>See note 1</div>	<div>Country rankings 2020:</div> <div><div><div>2</div></div><div><div>3</div></div><div><div>2</div></div></div> <div>See note 1</div>	<div>Stakeholder rankings 2020:</div> <div><div><div><u>Employees</u></div><div>1</div></div><div><u>B2B customers</u></div><div>13</div></div> <div><div><u>General public</u></div><div>2</div></div> <div><u>B2C customers</u></div> <div>2</div> <div>See notes 1&2</div>
<div>Importance in comparison to 2018 results:</div> <div><div><div></div><div></div></div><div>No change</div></div>	<div>Vattenfall's performance:</div> <div>'good'</div>	<div>Interview comments:</div> <div><div>"Could go faster, but important to show we can be profitable without passing on massive costs to customers"</div><div>"Moorburg. Solve it"</div><div>"Be leader in energy transition!"</div></div>
<div>Vattenfall's actions:</div> <div><div>We recognize the importance of reducing our contributions to climate change and have placed it t the center of our business through our visions to be fossil-free within one generation. We are committed to reduce our CO2 emissions in line with what is required to limit global warming to 2 degrees Celsius, and our targets is approved by Science Based Target initiative. To realize our ambition, we are working to accelerate the transition to a fossil-free society, not just internally but for our customers and industrial partners as well</div></div>		

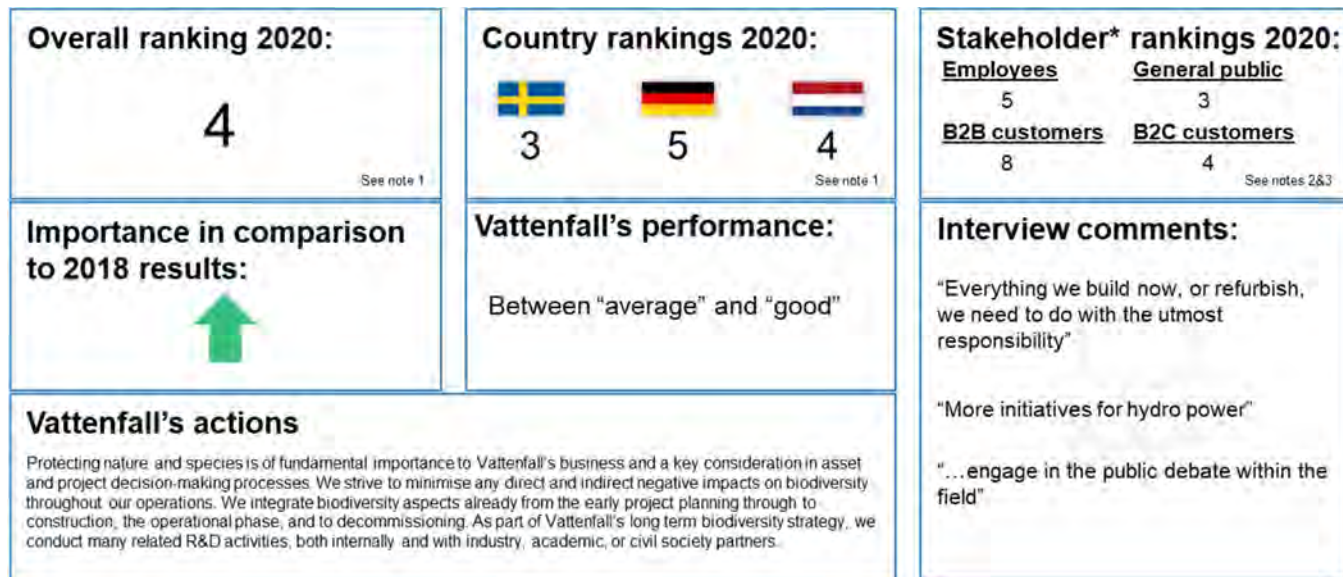
Notes: 1) Based solely on importance; 2) Displayed stakeholder groups are those with the highest number of respondents and at aggregate level across all markets. Ranking across stakeholder groups can vary at country level.

1.3.3. Increase renewables







Notes: 1) Based solely on importance; 2) Displayed stakeholder groups are those with the highest number of respondents and at aggregate level across all markets. Ranking across stakeholder groups can vary at country level.

1.3.4. Protecting nature and biodiversity







Notes: 1) Based solely on importance; 2) Displayed stakeholder groups are those with the highest number of respondents and at aggregate level across all markets. Ranking across stakeholder groups can vary at country level.

1.3.5. Minimizing emissions of pollutants into air, land and water

<div>Overall ranking 2020:</div> <div>5</div> <div>See note 1</div>	<div>Country rankings 2020:</div> <div><div> 1</div><div> 2</div><div> 6</div></div> <div>See note 1</div>	<div>Stakeholder* rankings 2020:</div> <div><div><u>Employees</u> 4</div><div><u>General public</u> 4</div><div><u>B2B customers</u> 11</div><div><u>B2C customers</u> 5</div></div> <div>See notes 1&2</div>
<div>Importance in comparison to 2018 results:</div> <div></div>	<div>Vattenfall's performance:</div> <div>"good"</div>	<div>Interview comments:</div> <div>N.A</div>
<div>Vattenfall's action:</div> <div>Minimising non-CO2 emissions like NOx, SOx, VOCs, and particulates is a regulated part of Vattenfall's business. Vattenfall strives to remain below legal limits, and to achieve this, nearly 100% of our electricity and heat production comes from sites with certified environmental management systems.</div>		





Notes: 1) Based solely on importance; 2) Displayed stakeholder groups are those with the highest number of respondents and at aggregate level across all markets. Ranking across stakeholder groups can vary at country level

1.3.6. Providing affordable, stable and flexible grid infrastructure

<div>Overall ranking 2020: 6 <small>See note 1</small></div>	<div>Country rankings 2020: <div> 6</div><div> 7</div><div> 8</div> <small>See note 1</small></div>	<div>Stakeholder* rankings 2020: <table><tr><td><u>Employees</u></td><td><u>General public</u></td></tr><tr><td>13</td><td>6</td></tr><tr><td><u>B2B customers</u></td><td><u>B2C customers</u></td></tr><tr><td>15</td><td>6</td></tr></table> <small>See notes 2&3</small></div>	<u>Employees</u>	<u>General public</u>	13	6	<u>B2B customers</u>	<u>B2C customers</u>	15	6
<u>Employees</u>	<u>General public</u>									
13	6									
<u>B2B customers</u>	<u>B2C customers</u>									
15	6									
<div>Importance in comparison to 2018 results: </div>	<div>Vattenfall's performance: "good"</div>	<div>Interview comments: "Need to ensure cost is optimized so everyone can afford a fossil-free society"</div>								
<div>Vattenfall's actions: Grids are a regulated part of the energy system. Vattenfall works within the boundaries set by the regulators, striving for the greatest balance between cost efficiency and efficacy of investments in order to improve grid quality, reliability, and adaptability to future conditions. An example is our commitment to enable the adoption of smart meters, digital solutions and related customer information.</div>										

Notes: 1) Based solely on importance; 2) Displayed stakeholder groups are those with the highest number of respondents and at aggregate level across all markets. Ranking across stakeholder groups can vary at country level

1.3.7. Develop innovative and sustainable service & solutions

<div>Overall ranking 2020:</div> <div>7</div> <div>See note 1</div>	<div>Country rankings 2020:</div> <div><div><div>10</div></div><div><div>10</div></div><div><div>5</div></div></div> <div>See note 1</div>	<div>Stakeholder* rankings 2020:</div> <table><tr><td><u>Employees</u></td><td><u>General public</u></td></tr><tr><td>10</td><td>7</td></tr><tr><td><u>B2B customers</u></td><td><u>B2C customers</u></td></tr><tr><td>5</td><td>7</td></tr></table> <div>See notes 1&2</div>	<u>Employees</u>	<u>General public</u>	10	7	<u>B2B customers</u>	<u>B2C customers</u>	5	7
<u>Employees</u>	<u>General public</u>									
10	7									
<u>B2B customers</u>	<u>B2C customers</u>									
5	7									
<div>Importance in comparison to 2018 results:</div> <div></div>	<div>Vattenfall's performance:</div> <div>"good"</div>	<div>Interview comments:</div> <div>"If we can show industrial partnerships are profitable, it will spur massive action"</div> <div>"use your marketing power to engage the general public in the energy transition"</div>								
<div>Vattenfall's actions:</div> <div>We help our customers to live a climate smart life and contribute to their safety and comfort. We offer sustainable and efficient products and services based on customers' individual energy needs. Our focus is on areas like smart, data-based solutions, decentralised generation (in particular solar (PV) and heat pumps), and new customer interaction models with the aim to achieve significant market size. We are aiming for a top-three position in e-mobility charging solutions in northwest Europe. In addition, we are striving to optimise the customer experience by accelerating digitalisation and offering bundled, integrated and climate-smart solutions.</div>										

Notes: 1) Based solely on importance; 2) Displayed stakeholder groups are those with the highest number of respondents and at aggregate level across all markets. Ranking across stakeholder groups can vary at country level