

## **Guidance for the template on reporting of used parameters and variables included in Annex 1, part 2, of the provisionally agreed Energy Union Governance**

The aim of this excel file is to facilitate reporting of the quantitative parameters and variables under Annex I Part 2 in the indicated format

- All parameters and variables highlighted in green are already currently requested under existing legislation (MMR, RES Directive, or Energy Efficiency Directive), see e.g. [http://cdr.eionet.europa.eu/help/mmr/MMR\\_projections\\_templates\\_2018.zip](http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip)
- All energy related parameters and variables highlighted in red might require to rely on complementary tools than standard energy system models
- All variables highlighted in orange correspond to indicators to be computed on the basis of parameters and variables already available elsewhere in the excel file
- The request for historical data relates to data if and when used in modelling
- All monetary Euro values shall be expressed in constant 2016 prices.
- Elements in red font are meant to provide further precision to what is currently indicated in the template in the provisionally agreed Governance Regulation. They aim to provide additional guidance or specifications and should facilitate the better understanding of modelling results by the Commission. While they remain optional, their use is much encouraged.
- Please report the used values for the years 2005 to 2040 in five yearly steps, and if possible yearly for 2021 to 2030 (the latter indicated in the red font as not required in the template in the Governance regulation).
- Column T can be used for comments that MS wish to provide (e.g. explanation of different methodology, caveats or sources of projections)

NECP1

| Reporting of used parameters and variables included in Annex 1, part 2, of the Energy Union Governance as agreed in trilogue  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
|---|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---|--|
| All parameters and variables highlighted in green are already currently requested under existing legislation (MMR, RES Directive, or Energy Efficiency Directive), see e.g. <a href="http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip">http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip</a> |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| All energy related parameters and variables highlighted in red might require to rely on complementary tools than standard energy system models  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| All variables highlighted in orange correspond to indicators to be computed on the basis of parameters and variables already available elsewhere in the excel file  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
|   | Unit                  | 2005    | 2010    | 2015    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2035    | 2040    | Comments MS   | Comments Commission  |
| <b>1. General parameters and variables</b>  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 1 Population  | million               | 4.13    | 4.55    | 4.64    | 4.87    | 4.91    | 4.95    | 5.00    | 5.04    | 5.08    | 5.12    | 5.16    | 5.20    | 5.24    | 5.28    | 5.48    | 5.69    |   |  |
| 2 GDP   | EUR million           | 177,364 | 163,739 | 180,922 | 216,578 | 221,760 | 227,508 | 233,480 | 239,713 | 246,003 | 252,457 | 259,168 | 266,243 | 273,823 | 282,075 | 327,224 | 371,914 |   |  |
| 3 Sectorial gross value added   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Market services   | EUR million           |         | 68,793  | 91,515  | 110,695 | 113,229 | 115,371 | 117,112 | 118,802 | 120,357 | 121,971 | 123,691 | 125,336 | 127,562 | 129,871 | 140,136 | 150,350 | These 3 additional rows were added.   |  |
| Non-marketed services, health and education   | EUR million           |         | 23,700  | 27,124  | 32,013  | 32,181  | 32,672  | 33,160  | 33,636  | 34,104  | 34,567  | 35,029  | 35,494  | 35,957  | 36,451  | 38,980  | 41,457  |   |  |
| Public administration and defence   | EUR million           |         | 5,332   | 6,261   | 7,389   | 7,428   | 7,541   | 7,654   | 7,764   | 7,872   | 7,979   | 8,085   | 8,193   | 8,302   | 8,414   | 8,993   | 9,569   |   |  |
| Agriculture   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Construction  | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Services  | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Energy Sector   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Industry  | EUR million           |         | 45,485  | 69,008  | 81,320  | 83,706  | 86,513  | 89,644  | 92,988  | 96,467  | 100,060 | 103,805 | 107,764 | 112,005 | 116,596 | 140,925 | 164,936 |   |  |
| 4 Number of households  | million               | 1.42    | 1.99    | 1.96    | 2.06    | 2.10    | 2.14    | 2.18    | 2.21    | 2.24    | 2.26    | 2.28    | 2.30    | 2.32    | 2.34    | 2.46    | 2.57    |   |  |
| 5 Households size   | inhabitants/household | 2.92    |         | 2.37    | 2.36    | 2.34    | 2.31    | 2.27    | 2.25    | 2.22    | 2.20    | 2.18    | 2.16    | 2.14    | 2.12    | 2.02    |         | From EPA MMR file   |  |
| 6 Disposable income of households (yearly)  | EUR                   |         | 91,444  | 94,273  | 137,606 | 140,568 | 142,679 | 144,563 | 145,820 | 146,315 | 146,871 | 147,544 | 148,409 | 149,510 | 150,915 | 155,659 | 160,394 |   | Please specify the definition applied  |
| 7 Number of passenger-kilometres  | million pkm           |         |         | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      |         | Taken from EPA MMR template   |  |
| Public road transport   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Private cars  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Motorcycles   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Rail  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Aviation  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Inland navigation   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 8 Freight transport tonnes-kilometres   | million tkm           |         | 17,819  | 10,924  | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      |         | Taken from EPA MMR template   |  |
| Trucks  | million tkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Rail  | million tkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Inland navigation   | million tkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 9 International Fuel prices   | EUR/GJ                |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Oil   | EUR2013/GJ            |         | 10.16   | 6.83    | 11.29   | 11.92   | 12.55   | 13.19   | 13.85   | 14.52   | 14.82   | 15.11   | 15.41   | 15.71   | 16.00   | 16.69   | 17.37   | note our prices are in 2013. from oil price sensitivity for price projections | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Gas (NCV)   | EUR2013/GJ            |         | 5.66    | 5.87    | 6.71    | 7.14    | 7.57    | 8.02    | 8.46    | 8.91    | 9.06    | 9.22    | 9.38    | 9.53    | 9.69    | 10.34   | 10.99   | from oil price sensitivity for price projections                              | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Coal  | EUR2013/GJ            |         | 2.92    | 1.82    | 2.59    | 2.65    | 2.71    | 2.77    | 2.84    | 2.92    | 3.03    | 3.15    | 3.27    | 3.38    | 3.50    | 3.70    | 3.91    | from oil price sensitivity for price projections                              | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Carbon price ETS sectors  | EUR2013/ ton CO2      |         | 0.00    | 7.50    | 15.00   | 16.50   | 18.00   | 19.50   | 21.00   | 22.50   | 24.70   | 26.90   | 29.10   | 31.30   | 33.50   | 42.00   | 50.50   | set equal to ETS price in oil price sensitivity tab                           | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| 11 Exchange rate to EUR and to US dollar  | USD/EUR               |         | 1.32    | 1.11    | 1.24    | 1.26    | 1.29    | 1.31    | 1.32    | 1.34    | 1.35    | 1.36    | 1.36    | 1.35    | 1.35    | 1.35    | 1.35    |   |  |
| 12 Heating degree days  |                       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      |   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| 13 Cooling degree days  |                       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      |   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| 14 Technology cost assumptions (see specific excel file circulated with technology cost assumptions as used in EU Reference Scenario 2016 for suggestions on what could be relevant to report)  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| <b>2. energy balances and indicators</b>  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| <b>2.1 energy supply</b>  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 1 Production (incl.recovery of products)  | Mtoe                  |         | 1,702   | 1,855   | 1,961   | 4,960   | 4,913   | 4,476   | 4,183   | 3,994   | 3,839   | 4,018   | 3,735   | 3,656   | 3,582   | 3,503   | 2,968   | 3,209   |  |
| Solids  | Mtoe                  |         | 845     | 1,020   | 838     | 566     | 561     | 567     | 557     | 546     | 546     | 543     | 530     | 527     | 529     | 519     | 235     | 218   | All coal is imported, so solids production is equal to peat and non-renewable waste primary energy demand.     |
| Oil   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0   | Zero because all Irish oil imported  |
| Natural gas   | Mtoe                  |         | 488     | 237     | 113     | 2,746   | 2,636   | 2,106   | 1,742   | 1,478   | 1,243   | 1,312   | 950     | 741     | 533     | 324     | 0       | 0   | Corrib gas supply from Gas Network   |
| Nuclear   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0   | Development plan   |
| Renewable energy sources  | Mtoe                  |         | 370     | 597     | 1,010   | 1,647   | 1,717   | 1,803   | 1,884   | 1,970   | 2,050   | 2,163   | 2,254   | 2,388   | 2,520   | 2,659   | 2,733   | 2,991   | Renewables primary energy demand minus imported biomass  |
| 2 Net Imports (Mtoe)  | Mtoe                  |         | 16,312  | 14,554  | 14,491  | 10,292  | 10,512  | 11,407  | 11,878  | 12,323  | 12,565  | 12,559  | 12,968  | 13,195  | 13,369  | 13,563  | 13,844  | 14,031  | Sum of solids, oil and NG imports and net electricity imports plus biomass imports                             |
| Solids  | Mtoe                  |         | 1,906   | 964     | 1,481   | 1,617   | 1,588   | 1,620   | 1,640   | 1,598   | 1,558   | 1,601   | 1,560   | 1,521   | 1,501   | 1,483   | 138     | 110   | All coal is imported so this is the balance of solids imported (primary energy demand for coal)                |
| Oil   | Mtoe                  |         | 11,214  | 8,957   | 9,106   | 7,110   | 7,186   | 7,206   | 7,188   | 7,160   | 7,108   | 7,116   | 7,137   | 7,133   | 7,140   | 7,141   | 7,027   | 6,916   | All oil is imported so equal to primary energy demand for oil  |
| Natural gas   | Mtoe                  |         | 3,016   | 4,487   | 3,629   | 1,410   | 1,549   | 2,336   | 2,772   | 3,473   | 3,889   | 3,840   | 4,278   | 4,686   | 4,870   | 5,065   | 6,905   | 7,264   | Gas primary energy demand minus corrib gas supply  |
| Electricity   | Mtoe                  |         | 176     | 65      | 151     | -159    | -118    | -52     | -12     | -191    | -263    | -273    | -273    | -402    | -389    | -361    | -403    | -437  | set equal to net electricity imports - exports   |
| 3 Import Dependency   | %                     |         | 89.9%   | 87.3%   | 88.4%   | 66.8%   | 67.6%   | 71.6%   | 73.9%   | 74.6%   | 75.4%   | 74.5%   | 76.4%   | 76.5%   | 77.1%   | 77.8%   | 80.4%   | 79.4%   |  |
| 4 Main import sources for energy carriers   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Main country of origin of Electricity Purchase: (United Kingdom)  | % of total imports    |         | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  |  |
| 1st main country (please specify here) of origin of Gas Purchases: (United Kingdom)   | % of total imports    |         | 100.0%  | 100.0%  | 100.0%  |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 2nd main country (please specify here) of origin of Gas Purchases   | % of total imports    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 3rd main country (please specify here) of origin of Gas Purchases   | % of total imports    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   | If more countries to be reported please add rows   |
| 5 Gross Inland Consumption  | Mtoe                  |         | 15,852  | 14,730  | 13,882  | 15,410  | 15,543  | 15,935  | 16,073  | 16,509  | 16,667  | 16,850  | 16,975  | 17,253  | 17,340  | 17,426  | 17,216  | 17,677  | Gross inland consumption assumed equal to primary energy consumption minus net imports/exports                 |
| Solids  | Mtoe                  |         | 2,673   | 2,005   | 2,261   | 2,183   | 2,149   | 2,187   | 2,197   | 2,144   | 2,104   | 2,144   | 2,090   | 2,048   | 2,030   | 2,003   | 373     | 328   | Includes peat, coal and non-renewable wastes   |
| Oil   | Mtoe                  |         | 9,130   | 7,294   | 6,658   | 7,110   | 7,186   | 7,206   | 7,188   | 7,160   | 7,108   | 7,116   | 7,137   | 7,133   | 7,140   | 7,141   | 7,027   | 6,916   |  |
| Natural gas   | Mtoe                  |         | 3,503   | 4,712   | 3,769   | 4,156   | 4,185   | 4,442   | 4,514   | 4,951   | 5,132   | 5,151   | 5,228   | 5,427   | 5,403   | 5,389   | 6,905   | 7,264   |  |
| Nuclear   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0   |  |
| Electricity   | Mtoe                  |         | 176     | 60      | 58      | -159    | -118    | -52     | -12     | -191    | -263    | -273    | -273    | -402    | -389    | -361    | -403    | -437  |  |
| Renewable energy forms  | Mtoe                  |         | 370     | 678     | 1,135   | 1,963   | 2,023   | 2,101   | 2,174   | 2,253   | 2,323   | 2,438   | 2,521   | 2,644   | 2,766   | 2,894   | 2,911   | 3,169   |  |
| Other   | Mtoe                  |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| <b>2.2. Electricity and heat</b>  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 1 Gross electricity generation  | GWhe                  |         | 25,749  | 28,934  | 28,389  | 33,768  | 34,563  | 36,893  | 37,794  | 40,949  | 42,577  | 43,385  | 44,163  | 46,207  | 47,108  | 47,936  | 52,461  | 56,687  | Total electricity generated including pumped storage and including normalised wind                             |
| 2 By fuel   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Nuclear energy  | GWhe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0   | Nuclear banned in Ireland  |
| Solids  | GWhe                  |         | 8,841   | 5,735   | 7,372   | 6,877   | 6,830   | 7,086   | 7,199   | 7,039   | 6,934   | 7,157   | 6,975   | 6,843   | 6,814   | 6,729   | 0       | 0   | Sum of coal and peat capacity  |
| Oil (including refinery gas)  | GWhe                  |         | 3,341   | 603     | 403     | 6       | 7       | 12      | 20      | 105     | 91      | 85      | 130     | 75      | 90      | 130     | 190     | 293   |  |
| Gas (including derived gases)   | GWhe                  |         | 11,576  | 18,114  | 12,370  | 14,094  | 14,215  | 15,875  | 16,291  | 19,198  | 20,675  | 20,896  | 21,455  | 22,966  | 22,847  | 22,727  | 32,651  | 35,027  |  |
| Biomass-waste   | GWhe                  |         | 8       | 110     | 274     | 1,592   | 1,589   | 1,590   | 1,590   | 1,592   | 1,590   | 1,589   | 1,590   | 1,591   | 1,590   | 1,590   | 624     | 622   | biodegradable waste + biomass co-firing+biomass CHP  |
| Hydro (pumping excluded)  | GWhe                  |         | 760     | 754     | 725     | 732     | 731     | 739     | 734     | 742     | 736     | 731     | 733     | 735     | 733     | 732     | 730     | 734   |  |
| Wind  | GWhe                  |         | 1,101   | 3,412   | 6,141   | 9,812   | 10,525  | 10,935  | 11,287  | 11,583  | 11,878  | 12,229  | 12,566  | 13,280  | 14,320  | 15,278  | 17,497  | 19,250  | Changed to wind normalised output  |
| Solar   | GWhe                  |         | 0       | 0       | 2       | 67      | 77      | 87      | 97      | 97      | 97      | 97      | 114     | 120     | 126     | 132     | 162     | 193   |  |



[illegible]



## NECP2

**Reporting of used parameters and variables included in Annex 1, part 2, of the Energy Union Governance as agreed in trilogue**

All parameters and variables highlighted in green are already currently requested under existing legislation (MMR, RES Directive, or Energy Efficiency Directive), see e.g. [http://cdr.eionet.europa.eu/help/mmr/MMR\\_projections\\_templates\\_2018.zip](http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip)

All energy related parameters and variables highlighted in red might require to rely on complementary tools than standard energy system models

[illegible]



[illegible]



NECP3

| Reporting of used parameters and variables included in Annex 1, part 2, of the Energy Union Governance as agreed in trilogue  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
|---|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---|--|
| All parameters and variables highlighted in green are already currently requested under existing legislation (MMR, RES Directive, or Energy Efficiency Directive), see e.g. <a href="http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip">http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip</a> |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| All energy related parameters and variables highlighted in red might require to rely on complementary tools than standard energy system models  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| All variables highlighted in orange correspond to indicators to be computed on the basis of parameters and variables already available elsewhere in the excel file  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
|   | Unit                  | 2005    | 2010    | 2015    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2035    | 2040    | Comments MS   | Comments Commission  |
| <b>1. General parameters and variables</b>  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 1 Population  | million               | 4.13    | 4.55    | 4.64    | 4.87    | 4.91    | 4.95    | 5.00    | 5.04    | 5.08    | 5.12    | 5.16    | 5.20    | 5.24    | 5.28    | 5.48    | 5.69    |   |  |
| 2 GDP   | EUR million           | 177,364 | 163,739 | 180,922 | 220,389 | 228,073 | 236,324 | 244,812 | 253,529 | 262,234 | 270,975 | 279,789 | 288,769 | 298,083 | 307,950 | 362,406 | 416,253 |   |  |
| 3 Sectorial gross value added   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Market services   | EUR million           |         | 68,793  | 91,515  | 111,337 | 114,887 | 118,345 | 121,531 | 124,597 | 127,383 | 130,063 | 132,683 | 135,278 | 137,939 | 140,813 | 155,659 | 170,404 | These 3 additional rows were added.   |  |
| Non-marketed services, health and education   | EUR million           |         | 23,700  | 27,124  | 32,088  | 32,355  | 32,981  | 33,633  | 34,295  | 34,963  | 35,636  | 36,310  | 36,986  | 37,664  | 38,347  | 42,058  | 45,746  |   |  |
| Public administration and defence   | EUR million           |         | 5,932   | 6,261   | 7,406   | 7,468   | 7,612   | 7,763   | 7,916   | 8,070   | 8,225   | 8,381   | 8,537   | 8,693   | 8,851   | 9,708   | 10,559  |   |  |
| Agriculture   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Construction  | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Services  | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Energy Sector   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Industry  | EUR million           |         |         | 45,485  | 69,008  | 83,831  | 87,484  | 91,380  | 95,522  | 99,868  | 104,359 | 108,944 | 113,628 | 118,455 | 123,499 | 128,849 | 159,085 | 188,881   |  |
| 4 Number of households  | million               | 1.42    | 1.99    | 1.96    | 2.06    | 2.10    | 2.15    | 2.20    | 2.24    | 2.29    | 2.33    | 2.37    | 2.41    | 2.45    | 2.49    | 2.71    | 2.93    |   |  |
| 5 Households size   | inhabitants/household | 2.92    |         | 2.37    | 2.36    | 2.34    | 2.31    | 2.27    | 2.25    | 2.22    | 2.20    | 2.18    | 2.16    | 2.14    | 2.12    | 2.02    |         | From EPA MMR file   |  |
| 6 Disposable income of households (yearly)  | EUR                   |         | 91,444  | 94,273  | 139,653 | 144,083 | 147,766 | 151,233 | 153,960 | 155,750 | 157,415 | 159,015 | 160,643 | 162,371 | 164,295 | 173,309 | 182,290 |   | Please specify the definition applied  |
| 7 Number of passenger-kilometers  | million pkm           |         |         | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | Taken from EPA MMR template   |  |
| Public road transport   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Private cars  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Motorcycles   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Rail  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Aviation  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Inland navigation   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 8 Freight transport tonnes-kilometres   | million tkm           |         | 17,819  | 10,924  | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | Taken from EPA MMR template   |  |
| Trucks  | million km            |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Rail  | million km            |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Inland navigation   | million km            |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 9 International Fuel prices   | EUR/GJ                |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Oil   | EUR2013/GJ            |         | 10.16   | 6.83    | 8.65    | 8.04    | 7.47    | 6.93    | 6.41    | 5.92    | 5.97    | 6.04    | 6.13    | 6.24    | 6.37    | 7.04    | 7.70    | note our prices are in 2013, from oil price sensitivity for price projections | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Gas (NCV)   | EUR2013/GJ            |         | 5.66    | 5.87    | 5.11    | 4.71    | 4.32    | 3.93    | 3.56    | 3.20    | 3.21    | 3.14    | 3.17    | 3.12    | 3.16    | 2.96    | 2.75    | from oil price sensitivity for price projections                              | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Coal  | EUR2013/GJ            |         | 2.92    | 1.82    | 2.06    | 1.86    | 1.68    | 1.50    | 1.33    | 1.17    | 1.18    | 1.20    | 1.22    | 1.22    | 1.25    | 1.17    | 1.08    | from oil price sensitivity for price projections                              | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Carbon price ETS sectors  | EUR2013/ ton CO2      |         | 0.00    | 7.50    | 15.00   | 16.50   | 18.00   | 19.50   | 21.00   | 22.50   | 24.70   | 26.90   | 29.10   | 31.30   | 33.50   | 42.00   | 50.50   | set equal to ETS price in oil price sensitivity tab                           | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| 11 Exchange rate to EUR and to US dollar  | USD/EUR               |         | 1.32    | 1.11    | 1.24    | 1.26    | 1.29    | 1.31    | 1.33    | 1.35    | 1.36    | 1.38    | 1.38    | 1.38    | 1.38    | 1.38    | 1.38    |   |  |
| 12 Heating degree days  |                       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      |   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| 13 Cooling degree days  |                       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      |   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| Technology cost assumptions (see specific excel file circulated with technology cost assumptions as used in EU Reference Scenario 2016 for suggestions on what could be relevant to report)   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| <b>2. energy balances and indicators</b>  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| <b>2.1 energy supply</b>  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 1 Production (incl.recovery of products)  | Mtoe                  |         | 1,702   | 1,855   | 1,961   | 4,978   | 4,933   | 4,487   | 4,190   | 3,988   | 3,823   | 3,980   | 3,700   | 3,606   | 3,507   | 3,415   | 2,919   | 3,207   |  |
| Solids  | Mtoe                  |         | 845     | 1,020   | 838     | 565     | 560     | 565     | 556     | 543     | 543     | 530     | 533     | 529     | 519     | 510     | 234     | 217   | All coal is imported, so solids production is equal to peat and non-renewable waste primary energy demand.     |
| Oil   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0   | Zero because all Irish oil is imported   |
| Natural gas   | Mtoe                  |         | 488     | 237     | 113     | 2,746   | 2,636   | 2,106   | 1,742   | 1,478   | 1,243   | 1,312   | 950     | 741     | 533     | 324     | 0       | 0   | Corrib gas supply from Gas Network Development plan  |
| Nuclear   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0   | Zero nuclear   |
| Renewable energy sources  | Mtoe                  |         | 370     | 597     | 1,010   | 1,667   | 1,737   | 1,816   | 1,893   | 1,967   | 2,037   | 2,138   | 2,216   | 2,335   | 2,456   | 2,581   | 2,685   | 2,990   | Renewables primary energy demand minus imported biomass  |
| 2 Net Imports (Mtoe)  | Mtoe                  |         | 16,312  | 14,554  | 14,491  | 11,154  | 11,502  | 12,515  | 13,017  | 13,535  | 13,696  | 13,758  | 14,209  | 14,510  | 14,769  | 15,032  | 16,216  | 16,809  | Sum of solids, oil and NG imports and net electricity imports plus biomass imports                             |
| Solids  | Mtoe                  |         | 1,906   | 964     | 1,481   | 1,518   | 1,455   | 1,405   | 1,200   | 1,039   | 533     | 486     | 359     | 308     | 279     | 325     | 124     | 99  | All coal is imported so this is the balance of solids imported (primary energy demand for coal)                |
| Oil   | Mtoe                  |         | 11,214  | 8,957   | 9,106   | 7,661   | 7,807   | 7,915   | 7,981   | 8,037   | 8,062   | 8,116   | 8,175   | 8,201   | 8,236   | 8,250   | 8,217   | 8,190   | All oil is imported so equal to primary energy demand for oil  |
| Natural gas   | Mtoe                  |         | 3,016   | 4,487   | 3,629   | 1,787   | 2,036   | 2,912   | 3,446   | 4,204   | 4,849   | 4,898   | 5,398   | 5,858   | 6,102   | 6,282   | 7,900   | 8,527   | Gas primary energy demand minus corrib gas supply  |
| Electricity   | Mtoe                  |         | 176     | 65      | 151     | -124    | -96     | -5      | 113     | -9      | 1       | 9       | 41      | -79     | -57     | -20     | -170    | -154  | set equal to net electricity imports - exports   |
| 3 Import Dependency   | %                     |         | 89.9%   | 87.3%   | 88.4%   | 68.6%   | 69.6%   | 73.6%   | 76.2%   | 77.2%   | 78.2%   | 77.6%   | 79.5%   | 79.7%   | 80.6%   | 81.4%   | 84.0%   | 83.3%   |  |
| 4 Main import sources for energy carriers   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| Main country of origin of Electricity Purchase: (United Kingdom)  | % of total imports    |         | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  |  |
| 1st main country (please specify here) of origin of Gas Purchases: United Kingdom   | % of total imports    |         | 100.0%  | 100.0%  | 100.0%  |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 2nd main country (please specify here) of origin of Gas Purchases   | % of total imports    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 3rd main country (please specify here) of origin of Gas Purchases   | % of total imports    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   | If more countries to be reported please add rows   |
| 5 Gross Inland Consumption  | Mtoe                  |         | 15,852  | 14,730  | 13,882  | 16,256  | 16,532  | 17,008  | 17,093  | 17,533  | 17,518  | 17,729  | 17,868  | 18,195  | 18,333  | 18,468  | 19,305  | 20,170  | Gross Inland consumption assumed equal to primary energy consumption minus net imports/exports                 |
| Solids  | Mtoe                  |         | 2,673   | 2,005   | 2,261   | 2,082   | 2,015   | 1,971   | 1,756   | 1,582   | 1,076   | 1,016   | 893     | 837     | 797     | 835     | 358     | 316   | Includes peat, coal and non-renewable wastes   |
| Oil   | Mtoe                  |         | 9,130   | 7,294   | 6,658   | 7,661   | 7,807   | 7,915   | 7,981   | 8,037   | 8,062   | 8,116   | 8,175   | 8,201   | 8,236   | 8,250   | 8,217   | 8,190   |  |
| Natural gas   | Mtoe                  |         | 3,503   | 4,712   | 3,769   | 4,533   | 4,672   | 5,018   | 5,188   | 5,682   | 6,092   | 6,210   | 6,348   | 6,599   | 6,635   | 6,606   | 7,900   | 8,527   |  |
| Nuclear   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0   |  |
| Electricity   | Mtoe                  |         | 176     | 60      | 58      | -124    | -96     | -5      | 113     | -9      | 1       | 9       | 41      | -79     | -57     | -20     | -170    | -154  |  |
| Renewable energy forms  | Mtoe                  |         | 370     | 678     | 1,135   | 1,979   | 2,037   | 2,104   | 2,169   | 2,232   | 2,287   | 2,386   | 2,452   | 2,558   | 2,665   | 2,777   | 2,830   | 3,136   |  |
| Other   | Mtoe                  |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| <b>2.2. Electricity and heat</b>  |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |   |  |
| 1 Gross electricity generation  | GWh                   |         | 25,749  | 28,934  | 28,390  | 33,604  | 34,706  | 37,03   |         |         |         |         |         |         |         |         |         |   |  |



[illegible]



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| Reporting of used parameters and variables included in Annex 1, part 2, of the Energy Union Governance as agreed in trilogue  |   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|---|---|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|--|--|
| All parameters and variables highlighted in green are already currently requested under existing legislation (MMR, RES Directive, or Energy Efficiency Directive), see e.g. <a href="http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip">http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip</a> |   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
| All energy related parameters and variables highlighted in red might require to rely on complementary tools than standard energy system models  |   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
| All variables highlighted in orange correspond to indicators to be computed on the basis of parameters and variables already available elsewhere in the excel file  |   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Unit  | 2005                  | 2010    | 2015    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2035    | 2040    | Comments MS | Comments Commission  |  |
| <b>1. General parameters and variables</b>  |   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
| 1   | Population  | million               | 4.13    | 4.55    | 4.64    | 4.87    | 4.91    | 4.95    | 5.00    | 5.04    | 5.08    | 5.12    | 5.16    | 5.20    | 5.24    | 5.28    | 5.48    | 5.69        |  |  |
| 2   | GDP   | EUR million           | 177,364 | 163,739 | 180,922 | 220,389 | 228,073 | 236,324 | 244,812 | 253,529 | 262,234 | 270,975 | 279,789 | 288,769 | 298,083 | 307,950 | 362,406 | 416,253     |  |  |
| 3   | Sectorial gross value added   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Market services   | EUR million           |         | 68,793  | 91,515  | 111,337 | 114,887 | 118,345 | 121,531 | 124,597 | 127,383 | 130,063 | 132,683 | 135,278 | 137,939 | 140,813 | 155,659 | 170,404     | These 3 additional rows were added.  |  |
|   | Non-marketed services, health and education   | EUR million           |         | 23,700  | 27,124  | 32,088  | 32,355  | 32,981  | 33,633  | 34,295  | 34,963  | 35,636  | 36,310  | 36,986  | 37,664  | 38,347  | 42,058  | 45,746      |  |  |
|   | Public administration and defence   | EUR million           |         | 5,932   | 6,261   | 7,406   | 7,468   | 7,612   | 7,763   | 7,916   | 8,070   | 8,225   | 8,381   | 8,537   | 8,693   | 8,851   | 9,708   | 10,559      |  |  |
|   | Agriculture   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Construction  | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Services  | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Energy Sector   | EUR million           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Industry  | EUR million           |         | 45,485  | 69,008  | 83,831  | 87,484  | 91,380  | 95,522  | 99,868  | 104,359 | 108,944 | 113,628 | 118,455 | 123,499 | 128,849 | 159,085 | 188,881     |  |  |
| 4   | Number of households  | million               | 1.42    | 1.99    | 1.96    | 2.06    | 2.10    | 2.15    | 2.20    | 2.24    | 2.29    | 2.33    | 2.37    | 2.41    | 2.45    | 2.49    | 2.71    | 2.93        |  |  |
| 5   | Households size   | inhabitants/household | 2.92    |         | 2.37    | 2.36    | 2.34    | 2.31    | 2.27    | 2.25    | 2.22    | 2.20    | 2.18    | 2.16    | 2.14    | 2.12    | 2.02    |             | From EPA MMR file  |  |
| 6   | Disposable income of households (yearly)  | EUR                   |         | 91,444  | 94,273  | 139,653 | 144,083 | 147,766 | 151,233 | 153,960 | 155,750 | 157,415 | 159,015 | 160,643 | 162,371 | 164,295 | 173,309 | 182,290     |  | Please specify the definition applied  |
| 7   | Number of passenger-kilometers  | million pkm           |         |         | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE          | Taken from EPA MMR template  |  |
|   | Public road transport   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Private cars  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Motorcycles   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Rail  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Aviation  | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Inland navigation   | million pkm           |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
| 8   | Freight transport tonnes-kilometres   | million tkm           |         | 17,819  | 10,924  | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE      | NE          | Taken from EPA MMR template  |  |
|   | Trucks  | million km            |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Rail  | million km            |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Inland navigation   | million km            |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
| 9   | International Fuel prices   | EUR/GJ                |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
|   | Oil   | EUR2013/GJ            |         | 10.16   | 6.83    | 8.65    | 8.04    | 7.47    | 6.93    | 6.41    | 5.92    | 5.97    | 6.04    | 6.13    | 6.24    | 6.37    | 7.04    | 7.70        | note our prices are in 2013, from oil price sensitivity for price projections                                  | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
|   | Gas (NCV)   | EUR2013/GJ            |         | 5.66    | 5.87    | 5.11    | 4.71    | 4.32    | 3.93    | 3.56    | 3.20    | 3.21    | 3.14    | 3.17    | 3.12    | 3.16    | 2.96    | 2.75        | from oil price sensitivity for price projections   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
|   | Coal  | EUR2013/GJ            |         | 2.92    | 1.82    | 2.06    | 1.86    | 1.68    | 1.50    | 1.33    | 1.17    | 1.18    | 1.20    | 1.22    | 1.22    | 1.25    | 1.17    | 1.08        | from oil price sensitivity for price projections   | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
|   | Carbon price ETS sectors  | EUR2013/ ton CO2      |         | 0.00    | 7.50    | 15.00   | 16.50   | 18.00   | 19.50   | 21.00   | 22.50   | 24.70   | 26.90   | 29.10   | 31.30   | 33.50   | 42.00   | 50.50       | set equal to ETS price in oil price sensitivity tab  | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |
| 11  | Exchange rate to EUR and to US dollar   | USD/EUR               |         | 1.32    | 1.11    | 1.24    | 1.26    | 1.29    | 1.31    | 1.33    | 1.35    | 1.36    | 1.38    | 1.38    | 1.38    | 1.38    | 1.38    | 1.38        |  |  |
| 12  | Heating degree days   |                       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      |             | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |  |
| 13  | Cooling degree days   |                       | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      | NA      |             | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |  |
| 14  | Technology cost assumptions (see specific excel file circulated with technology cost assumptions as used in EU Reference Scenario 2016 for suggestions on what could be relevant to report) |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             | Please specify if Commission's proposal or other source was applied and in the latter case specify methodology |  |
| <b>2. energy balances and indicators</b>  |   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
| <b>2.1 energy supply</b>  |   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
| 1   | Production (incl.recovery of products)  | Mtoe                  |         | 1,702   | 1,855   | 1,961   | 4,965   | 4,957   | 4,555   | 4,357   | 4,238   | 4,230   | 4,546   | 4,411   | 4,376   | 4,332   | 4,315   | 4,054       | 4,493  |  |
|   | Solids  | Mtoe                  |         | 845     | 1,020   | 838     | 565     | 560     | 564     | 551     | 399     | 402     | 388     | 392     | 385     | 377     | 372     | 231         | 212  | All coal is imported, so solids production is equal to peat and non-renewable waste primary energy demand.     |
|   | Oil   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0           | 0  | Zero because all Irish oil is imported   |
|   | Natural gas   | Mtoe                  |         | 488     | 237     | 113     | 2,746   | 2,636   | 2,106   | 1,742   | 1,478   | 1,243   | 1,312   | 950     | 741     | 533     | 324     | 0           | 0  | Corrib gas supply from Gas Network Development plan  |
|   | Nuclear   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0           | 0  | Zero nuclear   |
|   | Renewable energy sources  | Mtoe                  |         | 370     | 597     | 1,010   | 1,654   | 1,761   | 1,885   | 2,064   | 2,361   | 2,585   | 2,846   | 3,069   | 3,250   | 3,422   | 3,619   | 3,822       | 4,282  | Renewables primary energy demand minus imported biomass  |
| 2   | Net Imports (Mtoe)  | Mtoe                  |         | 16,312  | 14,554  | 14,491  | 11,073  | 11,372  | 12,348  | 12,682  | 13,030  | 12,934  | 12,539  | 12,845  | 12,981  | 13,109  | 13,119  | 14,047      | 14,340   | Sum of solids, oil and NG imports and net electricity imports plus biomass imports                             |
|   | Solids  | Mtoe                  |         | 1,906   | 964     | 1,481   | 1,548   | 1,480   | 1,436   | 1,124   | 863     | 372     | 173     | 166     | 160     | 153     | 148     | 123         | 97   | All coal is imported so this is the balance of solids imported (primary energy demand for coal)                |
|   | Oil   | Mtoe                  |         | 11,214  | 8,957   | 9,106   | 7,562   | 7,697   | 7,789   | 7,820   | 7,824   | 7,753   | 7,726   | 7,698   | 7,638   | 7,554   | 7,444   | 7,092       | 6,729  | All oil is imported so equal to primary energy demand for oil  |
|   | Natural gas   | Mtoe                  |         | 3,016   | 4,487   | 3,629   | 1,602   | 1,841   | 2,735   | 3,275   | 3,967   | 4,431   | 4,052   | 4,423   | 4,720   | 4,983   | 5,020   | 6,668       | 7,552  | Gas primary energy demand minus corrib gas supply  |
|   | Electricity   | Mtoe                  |         | 176     | 65      | 151     | -70     | -65     | -17     | 63      | -78     | -73     | 120     | 94      | 3       | -34     | 65      | -152        | -351   | set equal to net electricity imports - exports   |
| 3   | Import Dependency   | %                     |         | 89.9%   | 87.3%   | 88.4%   | 68.7%   | 69.4%   | 73.0%   | 74.7%   | 75.1%   | 75.0%   | 73.9%   | 74.8%   | 74.8%   | 75.0%   | 75.5%   | 77.0%       | 74.7%  |  |
| 4   | Main import sources for energy carriers   |                       |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | Main country of origin of Electricity Purchases: (United Kingdom) (overtaken by France with Celtic interconnector from 2026 to 2029)  | % of total imports    |         | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%  | 100.0%      | 100.0%   |  |
|   | 1st main country (please specify here) of origin of Gas Purchases: United Kingdom   | % of total imports    |         | 100.0%  | 100.0%  | 100.0%  |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | 2nd main country (please specify here) of origin of Gas Purchases   | % of total imports    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  |  |
|   | 3rd main country (please specify here) of origin of Gas Purchases   | % of total imports    |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |             |  | If more countries to be reported please add rows   |
| 5   | Gross Inland Consumption  | Mtoe                  |         | 15,852  | 14,730  | 13,882  | 16,108  | 16,394  | 16,920  | 16,976  | 17,346  | 17,237  | 16,966  | 17,163  | 17,353  | 17,475  | 17,370  | 18,253      | 19,184   | Gross inland consumption assumed equal to primary energy consumption minus net imports/exports                 |
|   | Solids  | Mtoe                  |         | 2,673   | 2,005   | 2,261   | 2,114   | 2,040   | 2,000   | 1,675   | 1,263   | 774     | 561     | 558     | 544     | 530     | 520     | 354         | 309  | Includes peat, coal and non-renewable wastes   |
|   | Oil   | Mtoe                  |         | 9,130   | 7,294   | 6,658   | 7,562   | 7,697   | 7,789   | 7,820   | 7,824   | 7,753   | 7,726   | 7,698   | 7,638   | 7,554   | 7,444   | 7,092       | 6,729  |  |
|   | Natural gas   | Mtoe                  |         | 3,503   | 4,712   | 3,769   | 4,348   | 4,478   | 4,841   | 5,017   | 5,446   | 5,674   | 5,364   | 5,373   | 5,461   | 5,515   | 5,344   | 6,668       | 7,552  |  |
|   | Nuclear   | Mtoe                  |         | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0           | 0  |  |
|   | Electricity   | Mtoe                  |         | 176     | 40      | 58      | -70     | -65     | -17     | 63      | -78     | -73     | 120     | 94      | 3       | -34     | 65      | -152        | -351   |  |
|   | Renewable energy forms  | Mtoe                  |         | 370     | 678     | 1,135   | 2,084   | 2,179   |         |         |         |         |         |         |         |         |         |             |  |  |



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## NECP1 WEM high oil price

| Macroeconomic forecasts | Unit        | 2017    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2040    |
|-------------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| GDP                     | EUR million | 199,685 | 216,578 | 221,760 | 227,508 | 233,480 | 239,713 | 246,003 | 252,457 | 259,168 | 266,243 | 273,823 | 282,075 | 371,914 |
| Population              | million     | 4.74    | 4.87    | 4.91    | 4.95    | 5.00    | 5.04    | 5.08    | 5.12    | 5.16    | 5.20    | 5.24    | 5.28    | 5.69    |

| Sectoral Gross value added                  | Unit        | 2017    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2040    |
|---|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Industry                                    | EUR million | 76,487  | 81,320  | 83,706  | 86,513  | 89,644  | 92,988  | 96,467  | 100,060 | 103,805 | 107,764 | 112,005 | 116,596 | 164,936 |
| Market services                             | EUR million | 101,366 | 110,695 | 113,229 | 115,371 | 117,112 | 118,802 | 120,357 | 121,971 | 123,691 | 125,536 | 127,562 | 129,871 | 150,350 |
| Non-marketed services, health and education | EUR million | 29,967  | 32,013  | 32,181  | 32,672  | 33,160  | 33,636  | 34,104  | 34,567  | 35,029  | 35,494  | 35,967  | 36,451  | 41,457  |
| Public administration and defence           | EUR million | 6,917   | 7,389   | 7,428   | 7,541   | 7,654   | 7,764   | 7,872   | 7,979   | 8,085   | 8,193   | 8,302   | 8,414   | 9,569   |

| Global energy trends      | Unit             | 2017  | 2020  | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|---------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| International fuel prices |                  |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Oil                       | EUR2013/GJ       | 8.26  | 11.29 | 11.92 | 12.55 | 13.19 | 13.85 | 14.52 | 14.82 | 15.11 | 15.41 | 15.71 | 16.00 | 17.37 |
| Gas                       | EUR2013/GJ       | 5.04  | 6.71  | 7.14  | 7.57  | 8.02  | 8.46  | 8.91  | 9.06  | 9.22  | 9.38  | 9.53  | 9.69  | 10.99 |
| Coal                      | EUR2013/GJ       | 2.05  | 2.59  | 2.65  | 2.71  | 2.77  | 2.84  | 2.92  | 3.03  | 3.15  | 3.27  | 3.38  | 3.50  | 3.91  |
| Carbon price ETS sector   | EUR2013/ ton CO2 | 10.50 | 15.00 | 16.50 | 18.00 | 19.50 | 21.00 | 22.50 | 24.70 | 26.90 | 29.10 | 31.30 | 33.50 | 50.50 |

| Trends in GHG Emissions and removals                          | Unit   | 2016       | 2020       | 2021       | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       | 2040       |
|---|--------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| ETS sector emissions (in ETS scope since 2013)                | tCO2eq | 17,734,844 | 17,010,984 | 17,053,946 | 17,946,118 | 18,278,361 | 19,285,997 | 19,707,980 | 20,056,136 | 20,187,783 | 20,586,616 | 20,600,833 | 20,600,728 | 19,234,481 |
| Effort Sharing sector GHG emissions (in ETS scope since 2013) | tCO2eq | 43,810,977 | 44,646,914 | 44,818,054 | 44,821,817 | 44,706,335 | 44,495,947 | 44,262,498 | 44,297,226 | 44,201,501 | 44,167,036 | 44,100,725 | 44,025,235 | 42,856,276 |
| LULUCF (accounted according to EU legislation requirements)   | tCO2eq |            | 3,459,313  | 2,516,188  | 3,373,443  | 3,435,082  | 4,100,952  | 4,660,205  | 4,597,821  | 4,735,746  | 5,252,297  | 5,032,152  | 6,010,813  | 5,782,465  |

| Sectoral developments in GHG emissions | Unit   | 2016      | 2020      | 2021      | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      | 2040      |
|--|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Power Sector                           | ktCO2e | 12,076.43 | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |
| Industry                               |        | 4,554.61  | 3,982.79  | 3,962.39  | 3,942.55  | 3,911.53  | 3,872.94  | 3,833.68  | 3,790.11  | 3,745.68  | 3,707.05  | 3,671.68  | 3,631.75  | 3,799.97  |
| Residential                            | ktCO2e | 6,046.55  | 6,558.84  | 6,481.57  | 6,388.99  | 6,297.46  | 6,198.39  | 6,080.90  | 5,966.53  | 5,858.60  | 5,758.09  | 5,665.52  | 5,582.04  | 4,753.93  |
| Tertiary                               | ktCO2e | 1,867.77  | 1,380.98  | 1,360.03  | 1,339.84  | 1,317.17  | 1,293.75  | 1,269.28  | 1,245.06  | 1,220.85  | 1,197.87  | 1,175.91  | 1,155.15  | 1,212.68  |
| Transport                              | ktCO2e | 12,293.95 | 12,914.88 | 13,131.87 | 13,216.56 | 13,192.46 | 13,104.26 | 13,001.88 | 13,082.36 | 13,171.74 | 13,257.76 | 13,323.63 | 13,352.87 | 12,694.51 |

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4.1 i) Macroeconomic forecasts (GDP and population growth)

| Macroeconomic forecasts | Unit        | 2017    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2040    |
|-------------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| GDP                     | EUR million | 199,685 | 216,578 | 221,760 | 227,508 | 233,480 | 239,713 | 246,003 | 252,457 | 259,168 | 266,243 | 273,823 | 282,075 | 371,914 |
| Population              | million     | 4.74    | 4.87    | 4.91    | 4.95    | 5.00    | 5.04    | 5.08    | 5.12    | 5.16    | 5.20    | 5.24    | 5.28    | 5.69    |

4.1 ii) Sectoral changes expected to impact the energy system and GHG emissions

| Sectoral Gross value added                  | Unit        | 2017    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2040    |
|---|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Industry                                    | EUR million | 76,487  | 81,320  | 83,706  | 86,513  | 89,644  | 92,988  | 96,467  | 100,060 | 103,805 | 107,764 | 112,005 | 116,596 | 164,936 |
| Market services                             | EUR million | 101,366 | 110,695 | 113,229 | 115,371 | 117,112 | 118,802 | 120,357 | 121,971 | 123,691 | 125,536 | 127,562 | 129,871 | 150,350 |
| Non-marketed services, health and education | EUR million | 29,967  | 32,013  | 32,181  | 32,672  | 33,160  | 33,636  | 34,104  | 34,567  | 35,029  | 35,494  | 35,967  | 36,451  | 41,457  |
| Public administration and defence           | EUR million | 6,917   | 7,389   | 7,428   | 7,541   | 7,654   | 7,764   | 7,872   | 7,979   | 8,085   | 8,193   | 8,302   | 8,414   | 9,569   |

4.1 iii) Sectoral changes expected to impact the energy system and GHG emissions

| Global energy trends      | Unit             | 2017  | 2020  | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|---------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| International fuel prices |                  |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Oil                       | EUR2013/GJ       | 8.26  | 11.29 | 11.92 | 12.55 | 13.19 | 13.85 | 14.52 | 14.82 | 15.11 | 15.41 | 15.71 | 16.00 | 17.37 |
| Gas                       | EUR2013/GJ       | 5.04  | 6.71  | 7.14  | 7.57  | 8.02  | 8.46  | 8.91  | 9.06  | 9.22  | 9.38  | 9.53  | 9.69  | 10.99 |
| Coal                      | EUR2013/GJ       | 2.05  | 2.59  | 2.65  | 2.71  | 2.77  | 2.84  | 2.92  | 3.03  | 3.15  | 3.27  | 3.38  | 3.50  | 3.91  |
| Carbon price ETS sector   | EUR2013/ ton CO2 | 10.50 | 15.00 | 16.50 | 18.00 | 19.50 | 21.00 | 22.50 | 24.70 | 26.90 | 29.10 | 31.30 | 33.50 | 50.50 |

4.2.1 i) GHG emissions and removals (note 2016 used as current year as latest year in annual historic emissions accounting)

| Trends in GHG Emissions and removals                        | Unit   | 2016       | 2020       | 2021       | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       | 2040       |
|---|--------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| ETS sector emissions (in ETS scope since 2013)              | tCO2eq | 17,734,844 | 16,589,917 | 16,676,417 | 17,513,594 | 17,828,918 | 17,956,581 | 18,536,523 | 13,481,571 | 13,540,610 | 13,995,544 | 13,990,068 | 14,098,912 | 17,550,748 |
| Effort Sharing sector GHG emissions (in scope since 2013)   | tCO2eq | 43,810,977 | 44,037,959 | 44,168,293 | 44,116,758 | 43,885,910 | 43,515,795 | 43,041,806 | 42,739,311 | 42,418,241 | 42,060,062 | 41,627,165 | 41,124,754 | 37,843,948 |
| LULUCF (accounted according to EU legislation requirements) | tCO2eq |            | 3,459,313  | 2,516,188  | 3,373,443  | 3,435,082  | 4,100,952  | 4,660,205  | 4,597,821  | 4,735,746  | 5,252,297  | 5,032,152  | 6,010,813  | 5,886,476  |

4.2.1 ii) Projections of sectoral developments (note 2016 used as current year as latest year in annual historic emissions accounting)

| Sectoral developments in GHG emissions | Unit   | 2016      | 2020      | 2021      | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      | 2040      |
|--|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Power Sector                           | ktCO2e | 12,076.43 | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |
| Industry                               | ktCO2e | 4,554.61  | 3,899.84  | 3,871.06  | 3,843.47  | 3,807.55  | 3,784.49  | 3,747.64  | 3,708.32  | 3,649.40  | 3,596.10  | 3,545.51  | 3,488.35  | 3,649.20  |
| Residential                            | ktCO2e | 6,046.55  | 6,466.45  | 6,364.96  | 6,237.49  | 6,101.74  | 5,942.05  | 5,708.47  | 5,470.28  | 5,238.52  | 5,014.20  | 4,797.81  | 4,590.51  | 2,926.67  |
| Tertiary                               | ktCO2e | 1,867.77  | 1,323.78  | 1,295.60  | 1,268.43  | 1,232.66  | 1,206.45  | 1,168.94  | 1,132.07  | 1,094.33  | 1,057.80  | 1,022.30  | 988.05    | 950.02    |
| Transport                              | ktCO2e | 12,293.95 | 12,689.13 | 12,897.91 | 12,971.10 | 12,890.22 | 12,701.16 | 12,489.07 | 12,439.21 | 12,376.09 | 12,280.45 | 12,121.51 | 11,863.25 | 10,138.38 |

4.4 Dimension energy security

| Dimension energy security | Unit | 2017  | 2020  | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|---------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Gross inland consumption  |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Solids                    | ktoe | 1,802 | 2,197 | 2,163 | 2,188 | 2,201 | 1,995 | 2,057 | 584   | 582   | 569   | 556   | 545   | 321   |
| Oil                       | ktoe | 7,003 | 6,997 | 7,062 | 7,067 | 7,014 | 6,934 | 6,813 | 6,749 | 6,680 | 6,601 | 6,503 | 6,372 | 5,520 |
| Natural gas               | ktoe | 4,227 | 3,938 | 3,983 | 4,235 | 4,292 | 4,670 | 4,737 | 4,946 | 4,891 | 5,027 | 4,974 | 4,822 | 6,400 |
| Nuclear                   | ktoe | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| Electricity               | ktoe | -58   | -83   | -53   | 19    | 13    | -187  | -310  | 58    | 43    | -78   | -61   | 26    | -574  |
| Renewable energy forms    | ktoe | 1,355 | 2,078 | 2,148 | 2,240 | 2,393 | 2,725 | 2,921 | 3,170 | 3,384 | 3,592 | 3,787 | 4,189 | 4,437 |
| Other                     | NA   | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    |
| Domestic energy sources   |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Solids                    | ktoe | 684   | 567   | 561   | 566   | 556   | 403   | 405   | 391   | 396   | 391   | 384   | 380   | 213   |
| Oil                       | ktoe | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| Natural gas               | ktoe | 3,248 | 2,746 | 2,636 | 2,106 | 1,742 | 1,478 | 1,243 | 1,312 | 950   | 741   | 533   | 324   | 0     |
| Nuclear                   | ktoe | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| Renewable energy sources  | ktoe | 1,355 | 1,715 | 1,783 | 1,874 | 2,020 | 2,289 | 2,473 | 2,690 | 2,888 | 3,081 | 3,265 | 3,655 | 4,062 |
| Import dependency         | %    | 66%   | 66%   | 67%   | 71%   | 73%   | 73%   | 73%   | 72%   | 73%   | 73%   | 73%   | 73%   | 71%   |
| Relevant risks            |      |       |       |       |       |       |       |       |       |       |       |       |       |       |

4.5.1 Electricity interconnectivity

| Electricity interconnectivity            | Unit | 2017 | 2020 | 2021 | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|--|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Northern-Ireland and Republic of Ireland | MW   | 450  | 450  | 450  | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| Republic of Ireland and England          | MW   | 500  | 500  | 500  | 500   | 500   | 500   | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| Republic of Ireland and France           | MW   | 0    | 0    | 0    | 0     | 0     | 0     | 0     | 700   | 700   | 700   | 700   | 700   | 700   |

4.5.2 Energy transmission infrastructure

| Energy transmission infrastructure | Unit | 2017 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2040 |
|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

4.5.3 Electricity and gas markets, energy prices

| Energy transmission infrastructure | Unit      | 2017    | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2040 |
|------------------------------------|-----------|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| Electricity price                  |           |         |      |      |      |      |      |      |      |      |      |      |      |      |
| residential                        | euro/MWh  | 191     | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |
| industry                           | euro/MWh  | 126     | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |
| tertiary                           |           |         |      |      |      |      |      |      |      |      |      |      |      |      |
| Gas price                          |           |         |      |      |      |      |      |      |      |      |      |      |      |      |
| Industry                           | euro/ktoe | 197,984 | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |
| Households                         | euro/ktoe | 415,946 | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

5.1 i) Impact of planned policies on energy system and GHG emissions (only for advanced so not present for baseline (WEM))

| Development of the energy system                            | Unit   | 2017       | 2020       | 2021       | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       | 2040       |
|---|--------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gross inland consumption                                    |        |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Solids  | ktoe   | 1,802      | 2,197      | 2,163      | 2,188      | 2,201      | 1,995      | 2,057      | 584        | 582        | 569        | 556        | 545        | 321        |
| Oil   | ktoe   | 7,003      | 6,997      | 7,062      | 7,067      | 7,014      | 6,934      | 6,813      | 6,749      | 6,680      | 6,601      | 6,503      | 6,372      | 5,520      |
| Natural gas   | ktoe   | 4,227      | 3,938      | 3,983      | 4,235      | 4,292      | 4,670      | 4,737      | 4,946      | 4,891      | 5,027      | 4,974      | 4,822      | 6,400      |
| Nuclear   | ktoe   | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Electricity   | ktoe   | -58        | -83        | -53        | 19         | 13         | -187       | -310       | 58         | 43         | -78        | -61        | 26         | -574       |
| Renewable energy forms                                      | ktoe   | 1,355      | 2,078      | 2,148      | 2,240      | 2,393      | 2,725      | 2,921      | 3,170      | 3,384      | 3,592      | 3,787      | 4,189      | 4,437      |
| Other   | NA     | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         |
| GHG Emissions   |        |            |            |            |            |            |            |            |            |            |            |            |            |            |
| ETS sector emissions (in ETS scope since 2013)              | tCO2eq | 17,734,844 | 16,589,917 | 16,676,417 | 17,513,594 | 17,828,918 | 17,956,581 | 18,536,523 | 13,481,571 | 13,540,610 | 13,995,544 | 13,990,068 | 14,098,912 | 17,550,748 |
| Effort Sharing sector GHG emissions (in scope since 2013)   | tCO2eq | 43,810,977 | 44,037,959 | 44,168,293 | 44,116,758 | 43,885,910 | 43,515,795 | 43,041,806 | 42,739,311 | 42,418,241 | 42,060,062 | 41,627,165 | 41,124,754 | 37,843,948 |
| LULUCF (accounted according to EU legislation requirements) | tCO2eq |            | 3,459,313  | 2,516,188  | 3,373,443  | 3,435,082  | 4,100,952  | 4,660,205  | 4,597,821  | 4,735,746  | 5,252,297  | 5,032,152  | 6,010,813  | 5,886,476  |

5.4 i) Impact of planned policies on other member states

| Electricity interconnection flows between Ireland and:                              | Unit | 2018  | 2020  | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|---|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| UK (not including NI because of All-Island electricity system on Island of Ireland) |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Electricity imports   | GWh  | 479   | 507   | 446   | 545   | 520   | 962   | 1,451 | 1,214 | 1,390 | 1,134 | 1,216 | 1,585 | 1,323 |
| Electricity exports   | GWh  | 1,842 | 1,823 | 1,865 | 1,662 | 1,800 | 1,796 | 3,313 | 3,425 | 3,578 | 3,958 | 3,828 | 3,372 | 4,082 |
| France  |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Electricity imports   | GWh  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 5,112 | 5,059 | 5,028 | 4,855 | 4,666 | 1,681 |
| Electricity exports   | GWh  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 316   | 385   | 414   | 474   | 490   | 2,591 |



## NECP3 WAM High Oil Price

| Macroeconomic forecasts | Unit        | 2017    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2040    |
|-------------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| GDP                     | EUR million | 199,685 | 220,389 | 228,073 | 236,324 | 244,812 | 253,529 | 262,234 | 270,975 | 279,789 | 288,769 | 298,083 | 307,950 | 416,253 |
| Population              | million     | 4.74    | 4.87    | 4.91    | 4.95    | 5.00    | 5.04    | 5.08    | 5.12    | 5.16    | 5.20    | 5.24    | 5.28    | 5.69    |

| Sectoral Gross value added                  | Unit        | 2017    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2040    |
|---|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Industry                                    | EUR million | 76,487  | 83,831  | 87,484  | 91,380  | 95,522  | 99,868  | 104,359 | 108,944 | 113,628 | 118,455 | 123,499 | 128,849 | 188,881 |
| Market services                             | EUR million | 101,366 | 111,337 | 114,887 | 118,345 | 121,531 | 124,597 | 127,383 | 130,063 | 132,683 | 135,278 | 137,939 | 140,813 | 170,404 |
| Non-marketed services, health and education | EUR million | 29,967  | 32,088  | 32,355  | 32,981  | 33,633  | 34,295  | 34,963  | 35,636  | 36,310  | 36,986  | 37,664  | 38,347  | 45,746  |
| Public administration and defence           | EUR million | 6,917   | 7,406   | 7,468   | 7,612   | 7,763   | 7,915   | 8,070   | 8,225   | 8,381   | 8,537   | 8,693   | 8,851   | 10,559  |

| Global energy trends             | Unit             | 2017  | 2020  | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|----------------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>International fuel prices</b> |                  |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Oil                              | EUR2013/GJ       | 8.26  | 8.65  | 8.04  | 7.47  | 6.93  | 6.41  | 5.92  | 5.97  | 6.04  | 6.13  | 6.24  | 6.37  | 7.70  |
| Gas                              | EUR2013/GJ       | 5.04  | 5.11  | 4.71  | 4.32  | 3.93  | 3.56  | 3.20  | 3.21  | 3.14  | 3.17  | 3.12  | 3.16  | 2.75  |
| Coal                             | EUR2013/GJ       | 2.05  | 2.06  | 1.86  | 1.68  | 1.50  | 1.33  | 1.17  | 1.18  | 1.20  | 1.22  | 1.22  | 1.25  | 1.08  |
| <b>Carbon price ETS sector</b>   | EUR2013/ ton CO2 | 10.50 | 15.00 | 16.50 | 18.00 | 19.50 | 21.00 | 22.50 | 24.70 | 26.90 | 29.10 | 31.30 | 33.50 | 50.50 |

| Trends in GHG Emissions and removals                        | Unit   | 2016       | 2020       | 2021       | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       | 2040       |
|---|--------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| ETS sector emissions (in ETS scope since 2013)              | tCO2eq | 17,734,844 | 17,337,868 | 17,461,225 | 18,211,858 | 17,839,177 | 18,502,655 | 17,650,260 | 17,785,097 | 17,756,218 | 18,194,744 | 18,235,418 | 18,416,297 | 21,033,818 |
| Effort Sharing sector GHG emissions (in scope since 2013)   | tCO2eq | 43,810,977 | 46,834,156 | 47,309,174 | 47,621,849 | 47,831,312 | 47,890,708 | 47,912,747 | 48,070,496 | 48,222,854 | 48,307,082 | 48,352,031 | 48,352,752 | 48,155,529 |
| LULUCF (accounted according to EU legislation requirements) | tCO2eq |            | 3,459,313  | 2,516,188  | 3,373,443  | 3,435,082  | 4,100,952  | 4,660,205  | 4,597,821  | 4,735,746  | 5,252,297  | 5,032,152  | 6,010,813  | 5,886,476  |

| Sectoral developments in GHG emissions | Unit                | 2016      | 2020      | 2021      | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      | 2040      |
|--|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Power Sector                           | ktCO <sub>2</sub> e | 12,076.43 | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |
| Industry                               | ktCO <sub>2</sub> e | 4,554.61  | 4,706.26  | 4,765.28  | 4,806.38  | 4,868.79  | 4,897.10  | 4,953.57  | 4,976.23  | 5,027.78  | 5,044.58  | 5,085.81  | 5,090.77  | 5,781.95  |
| Residential                            | ktCO <sub>2</sub> e | 6,046.55  | 6,497.60  | 6,468.23  | 6,419.10  | 6,378.55  | 6,320.37  | 6,246.80  | 6,165.48  | 6,095.48  | 6,021.36  | 5,960.88  | 5,898.40  | 5,499.79  |
| Tertiary                               | ktCO <sub>2</sub> e | 1,867.77  | 1,775.95  | 1,778.59  | 1,779.68  | 1,782.34  | 1,779.58  | 1,777.81  | 1,770.36  | 1,764.28  | 1,751.57  | 1,740.38  | 1,725.66  | 1,859.49  |
| Transport                              | ktCO <sub>2</sub> e | 12,293.95 | 14,476.43 | 14,899.20 | 15,207.04 | 15,404.28 | 15,503.97 | 15,559.53 | 15,762.96 | 15,947.08 | 16,099.14 | 16,212.88 | 16,282.60 | 16,082.80 |

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NECP4 Annex 1 Part 2 Subset tables

NECP4 WAM High Oil Price

4.1 i) Macroeconomic forecasts (GDP and population growth)

| Macroeconomic forecasts | Unit        | 2017    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2040    |
|-------------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| GDP                     | EUR million | 199,685 | 220,389 | 228,073 | 236,324 | 244,812 | 253,529 | 262,234 | 270,975 | 279,789 | 288,769 | 298,083 | 307,950 | 416,253 |
| Population              | million     | 4.74    | 4.87    | 4.91    | 4.95    | 5.00    | 5.04    | 5.08    | 5.12    | 5.16    | 5.20    | 5.24    | 5.28    | 5.69    |

4.1 ii) Sectoral changes expected to impact the energy system and GHG emissions

| Sectoral Gross value added                  | Unit        | 2017    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2040    |
|---|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Industry                                    | EUR million | 76,487  | 83,831  | 87,484  | 91,380  | 95,522  | 99,868  | 104,359 | 108,944 | 113,628 | 118,455 | 123,499 | 128,849 | 188,881 |
| Market services                             | EUR million | 101,366 | 111,337 | 114,887 | 118,345 | 121,531 | 124,597 | 127,383 | 130,063 | 132,683 | 135,278 | 137,939 | 140,813 | 170,404 |
| Non-marketed services, health and education | EUR million | 29,967  | 32,088  | 32,355  | 32,981  | 33,633  | 34,295  | 34,963  | 35,636  | 36,310  | 36,986  | 37,664  | 38,347  | 45,746  |
| Public administration and defence           | EUR million | 6,917   | 7,406   | 7,468   | 7,612   | 7,763   | 7,916   | 8,070   | 8,225   | 8,381   | 8,537   | 8,693   | 8,851   | 10,559  |

4.1 iii) Sectoral changes expected to impact the energy system and GHG emissions

| Global energy trends      | Unit             | 2017  | 2020  | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|---------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| International fuel prices |                  |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Oil                       | EUR2013/GJ       | 8.26  | 8.65  | 8.04  | 7.47  | 6.93  | 6.41  | 5.92  | 5.97  | 6.04  | 6.13  | 6.24  | 6.37  | 7.70  |
| Gas                       | EUR2013/GJ       | 5.04  | 5.11  | 4.71  | 4.32  | 3.93  | 3.56  | 3.20  | 3.21  | 3.14  | 3.17  | 3.12  | 3.16  | 2.75  |
| Coal                      | EUR2013/GJ       | 2.05  | 2.06  | 1.86  | 1.68  | 1.50  | 1.33  | 1.17  | 1.18  | 1.20  | 1.22  | 1.22  | 1.25  | 1.08  |
| Carbon price ETS sector   | EUR2013/ ton CO2 | 10.50 | 15.00 | 16.50 | 18.00 | 19.50 | 21.00 | 22.50 | 24.70 | 26.90 | 29.10 | 31.30 | 33.50 | 50.50 |

4.2.1 i) GHG emissions and removals (note 2016 used as current year as latest year in annual historic emissions accounting)

| Trends in GHG Emissions and removals                        | Unit   | 2016       | 2020       | 2021       | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       | 2040       |
|---|--------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| ETS sector emissions (in ETS scope since 2013)              | tCO2eq | 17,734,844 | 17,102,884 | 17,183,057 | 17,999,078 | 17,225,275 | 16,687,569 | 15,431,929 | 13,996,322 | 14,171,932 | 14,465,475 | 14,670,850 | 14,404,487 | 19,054,279 |
| Effort Sharing sector GHG emissions (in scope since 2013)   | tCO2eq | 43,810,977 | 46,222,897 | 46,657,448 | 46,915,207 | 47,005,332 | 46,885,888 | 46,643,156 | 46,498,221 | 46,336,971 | 46,074,129 | 45,736,925 | 45,285,392 | 43,069,169 |
| LULUCF (accounted according to EU legislation requirements) | tCO2eq |            | 3,459,313  | 2,516,188  | 3,373,443  | 3,435,082  | 4,100,952  | 4,660,205  | 4,597,821  | 4,735,746  | 5,252,297  | 5,032,152  | 6,010,813  | 5,886,476  |

4.2.1 ii) Projections of sectoral developments (note 2016 used as current year as latest year in annual historic emissions accounting)

| Sectoral developments in GHG emissions | Unit   | 2016      | 2020      | 2021      | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      | 2040      |
|--|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Power Sector                           | ktCO2e | 12,076.43 | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |
| Industry                               | ktCO2e | 4,554.61  | 4,680.78  | 4,734.47  | 4,767.51  | 4,819.37  | 4,861.68  | 4,914.05  | 4,935.23  | 4,981.59  | 4,982.53  | 5,009.77  | 5,002.63  | 5,681.18  |
| Residential                            | ktCO2e | 6,046.55  | 6,405.20  | 6,351.59  | 6,267.58  | 6,182.80  | 6,064.02  | 5,874.32  | 5,669.16  | 5,475.32  | 5,277.35  | 5,093.03  | 4,906.71  | 3,672.29  |
| Tertiary                               | ktCO2e | 1,867.77  | 1,719.52  | 1,718.36  | 1,715.26  | 1,713.00  | 1,706.40  | 1,691.12  | 1,670.17  | 1,650.61  | 1,624.44  | 1,599.81  | 1,571.65  | 1,608.36  |
| Transport                              | ktCO2e | 12,293.95 | 14,231.71 | 14,643.62 | 14,936.72 | 15,066.92 | 15,048.52 | 14,975.44 | 15,028.44 | 15,040.38 | 14,991.40 | 14,861.37 | 14,623.18 | 13,329.06 |

4.4 Dimension energy security

| Dimension energy security | Unit | 2017  | 2020  | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|---------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Gross inland consumption  |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Solids                    | ktoe | 1,802 | 2,114 | 2,040 | 2,000 | 1,675 | 1,263 | 774   | 561   | 558   | 544   | 530   | 520   | 309   |
| Oil                       | ktoe | 7,003 | 7,562 | 7,697 | 7,789 | 7,820 | 7,824 | 7,753 | 7,726 | 7,698 | 7,638 | 7,554 | 7,444 | 6,729 |
| Natural gas               | ktoe | 4,227 | 4,348 | 4,478 | 4,841 | 5,017 | 5,446 | 5,674 | 5,364 | 5,373 | 5,461 | 5,515 | 5,344 | 7,552 |
| Nuclear                   | ktoe | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| Electricity               | ktoe | -58   | -70   | -65   | -17   | 63    | -78   | -73   | 120   | 94    | 3     | -34   | 65    | -351  |
| Renewable energy forms    | ktoe | 1,355 | 2,084 | 2,179 | 2,290 | 2,464 | 2,814 | 3,036 | 3,314 | 3,534 | 3,710 | 3,875 | 4,061 | 4,595 |
| Other                     | NA   | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    | NA    |
| Domestic energy sources   |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Solids                    | ktoe | 684   | 565   | 560   | 564   | 551   | 399   | 402   | 388   | 392   | 385   | 377   | 372   | 212   |
| Oil                       | ktoe | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| Natural gas               | ktoe | 3,248 | 2,746 | 2,636 | 2,106 | 1,742 | 1,478 | 1,243 | 1,312 | 950   | 741   | 533   | 324   | 0     |
| Nuclear                   | ktoe | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| Renewable energy sources  | ktoe | 1,355 | 1,654 | 1,761 | 1,885 | 2,064 | 2,361 | 2,585 | 2,846 | 3,069 | 3,250 | 3,422 | 3,619 | 4,282 |
| Import dependency         | %    | 66%   | 69%   | 69%   | 73%   | 75%   | 75%   | 75%   | 74%   | 75%   | 75%   | 75%   | 76%   | 75%   |
| Relevant risks            |      |       |       |       |       |       |       |       |       |       |       |       |       |       |

4.5.1 Electricity interconnectivity

| Electricity interconnectivity            | Unit | 2017 | 2020 | 2021 | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|--|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Northern-Ireland and Republic of Ireland | MW   | 450  | 450  | 450  | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| Republic of Ireland and England          | MW   | 500  | 500  | 500  | 500   | 500   | 500   | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| Republic of Ireland and France           | MW   | 0    | 0    | 0    | 0     | 0     | 0     | 0     | 700   | 700   | 700   | 700   | 700   | 700   |

4.5.2 Energy transmission infrastructure

| Energy transmission infrastructure | Unit | 2017 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2040 |
|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

4.5.3 Electricity and gas markets, energy prices

| Energy transmission infrastructure | Unit      | 2017    | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2040 |
|------------------------------------|-----------|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| Electricity price                  |           |         |      |      |      |      |      |      |      |      |      |      |      |      |
| residential                        | euro/MWh  | 186     | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |
| industry                           | euro/MWh  | 123     | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |
| tertiary                           |           |         |      |      |      |      |      |      |      |      |      |      |      |      |
| Gas price                          |           |         |      |      |      |      |      |      |      |      |      |      |      |      |
| Industry                           | euro/ktoe | 197,984 | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |
| Households                         | euro/ktoe | 415,946 | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   |

5.1 i) Impact of planned policies on energy system and GHG emissions (only for advanced so not present for baseline (WEM))

| Development of the energy system                            | Unit   | 2017       | 2020       | 2021       | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       | 2040       |
|---|--------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gross inland consumption                                    |        |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Solids  | ktoe   | 1,802      | 2,114      | 2,040      | 2,000      | 1,675      | 1,263      | 774        | 561        | 558        | 544        | 530        | 520        | 309        |
| Oil   | ktoe   | 7,003      | 7,562      | 7,697      | 7,789      | 7,820      | 7,824      | 7,753      | 7,726      | 7,698      | 7,638      | 7,554      | 7,444      | 6,729      |
| Natural gas   | ktoe   | 4,227      | 4,348      | 4,478      | 4,841      | 5,017      | 5,446      | 5,674      | 5,364      | 5,373      | 5,461      | 5,515      | 5,344      | 7,552      |
| Nuclear   | ktoe   | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |
| Electricity   | ktoe   | -58        | -70        | -65        | -17        | 63         | -78        | -73        | 120        | 94         | 3          | -34        | 65         | -351       |
| Renewable energy forms                                      | ktoe   | 1,355      | 2,084      | 2,179      | 2,290      | 2,464      | 2,814      | 3,036      | 3,314      | 3,534      | 3,710      | 3,875      | 4,061      | 4,595      |
| Other   | NA     | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         | NA         |
| GHG Emissions   |        |            |            |            |            |            |            |            |            |            |            |            |            |            |
| ETS sector emissions (in ETS scope since 2013)              | tCO2eq | 17,734,844 | 17,102,884 | 17,183,057 | 17,999,078 | 17,225,275 | 16,687,569 | 15,431,929 | 13,996,322 | 14,171,932 | 14,465,475 | 14,670,850 | 14,404,487 | 19,054,279 |
| Effort Sharing sector GHG emissions (in scope since 2013)   | tCO2eq | 43,810,977 | 46,222,897 | 46,657,448 | 46,915,207 | 47,005,332 | 46,885,888 | 46,643,156 | 46,498,221 | 46,336,971 | 46,074,129 | 45,736,925 | 45,285,392 | 43,069,169 |
| LULUCF (accounted according to EU legislation requirements) | tCO2eq |            | 3,459,313  | 2,516,188  | 3,373,443  | 3,435,082  | 4,100,952  | 4,660,205  | 4,597,821  | 4,735,746  | 5,252,297  | 5,032,152  | 6,010,813  | 5,886,476  |

5.4 i) Impact of planned policies on other member states

| Electricity interconnection flows between Ireland and:                              | Unit | 2018  | 2020  | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2040  |
|---|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| UK (not including NI because of All-Island electricity system on Island of Ireland) |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Electricity imports   | GWh  | 507   | 600   | 476   | 675   | 746   | 896   | 1,900 | 1,409 | 1,609 | 1,409 | 1,462 | 1,835 | 1,504 |
| Electricity exports   | GWh  | 1,823 | 1,690 | 1,809 | 1,633 | 1,180 | 1,391 | 2,423 | 3,206 | 3,286 | 3,465 | 3,562 | 3,348 | 3,489 |
| France  |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Electricity imports   | GWh  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 4,942 | 4,815 | 4,732 | 4,634 | 4,413 | 1,979 |
| Electricity exports   | GWh  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 439   | 511   | 621   | 681   | 629   | 2,204 |