



Rialtas na hÉireann
Government of Ireland

Electricity Demand Reduction Measures

As required under Articles 3 and 4 of Council Regulation (EU) 2022/1854 on an emergency intervention to address high energy prices

December 2022

Prepared by the Department of the
Environment, Climate and Communications
[gov.ie](https://www.gov.ie)

Implementation of Demand Reduction Measures listed under Articles 3 and 4 of Council Regulation 2022/1854 on an emergency intervention to address high energy prices

Submission from Ireland's Department of the Environment, Climate and Communications

December 2022

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Executive Summary

Council Regulation (EU) 2022/1854 on an emergency intervention to address high energy prices was published in the Official Journal of the EU on the 7 October 2022. Articles 3 and 4 of the Regulation included requirements for Member States to achieve reductions in electricity demand. These requirements took the form of two targets:

1. The first is a mandatory reduction target of 5% of electricity consumption in peak hours in the period December 2022 to March 2023. This target is based on projected forecasts and was calculated to be a total of 76.9GWh to be reduced during peak hours.
2. The second target requires Ireland to endeavour to implement measures to achieve an overall reduction target of 10% of electricity consumption in the period between November 2022 and March 2023. This target is based on consumption during an historical reference period and was calculated to equate to total reduction of 1,052GWh.

A Working Group comprised of relevant energy agencies and government departments conducted the calculations of the reduction targets and identified eligible measures to achieve significant reductions in electricity demand. This submission – which has been prepared by the Department of the Environment, Climate and Communications - sets out Ireland's efforts to achieve these targets and also on how it will monitor and report on its performance to achieve the required reductions.

Measures identified to reduce demand towards these targets include a conservation voltage reduction scheme, 'Beat-the-Peak' pilot schemes to achieve domestic and commercial demand flexibility, various energy efficiency schemes within the public and private sector, introduction of peak tariffs by the energy regulator and a nationwide 'Reduce Your Use' information campaign.

Efforts were made to quantify the effects of measures however it was not always possible to do so for a number of reasons including the tight time-constraint to identify and report on suitable initiatives. Nonetheless the Department is confident that these measures will have a significant impact in hitting the targets as set out in the Regulation.

Overview

This submission details how Ireland will implement Articles 3 and 4 of Council Regulation (EU) 2022/1854 emergency intervention to address high energy prices (hereafter '**the Regulation**'). The Regulation contains two electricity demand reduction obligations for Member States, namely to:

- a) Achieve a mandatory reduction target of 5% of electricity consumption in peak hours in the period December 2022 to March 2023 as per Article 4 of the Regulation, and
- b) Endeavour to implement measures to reduce 10% of gross electricity consumption in the period November 2022 to March 2023 as per Article 3 of the Regulation.

This submission sets out what these targets are for Ireland, the proposed measures that Ireland will undertake to achieve these targets and also the monitoring mechanism that will be established to fulfil the reporting requirements set out in Article 19. 3(a) of the Regulation.

The calculation of the reduction targets and the identification of the short-list of eligible measures was conducted by a group (hereafter '**the Working-Group**') consisting of representatives from:

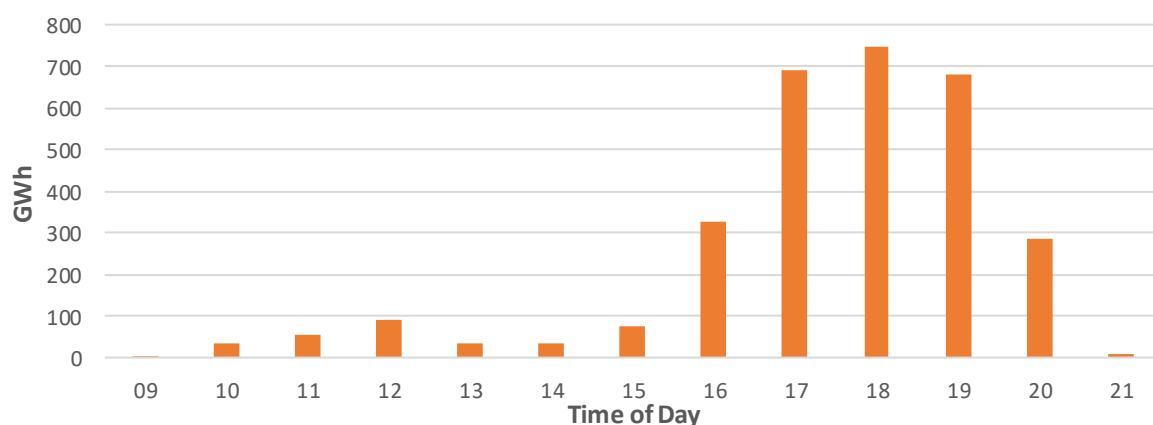
- ESB-Networks, the Irish Distribution Systems Operator, (hereafter '**ESB-N**')
- EirGrid, the Irish Transmission System Operator, (hereafter '**EirGrid**')
- Commission for the Regulation of Utilities, the Irish electricity regulator (hereafter '**CRU**'),
- Department of the Environment, Climate and Communications and (hereafter '**DECC**') and,
- Department of Enterprise, Trade and Employment. (hereafter '**DETE**').

1.Reduction of gross electricity consumption during peak hours

a)Identification of target to achieve gross reduction of 5% during peak hours

In order to identify peak hours as defined in Article 2. (4) of the Regulation, ESB-N conducted calculations based on forecast data provided by EirGrid for the period December 2022 - March 2023. The forecast is based on Total Electricity Requirement¹ (TER) data that was used to develop the median scenario in EirGrid's Generation Capacity Statement². The 10% highest demand hours (the half-hourly periods that had the highest consumption) in the Republic of Ireland were then extracted for that period. The distribution of these peak hours is displayed in Graph 1.

Graph 1: Identification of Reduction Target for Peak Hours



The total electricity demand for the peak hours above is 1,538 GWh. A 5% reduction in demand during these identified peak hours amounts to a total of 76.9 GWh.

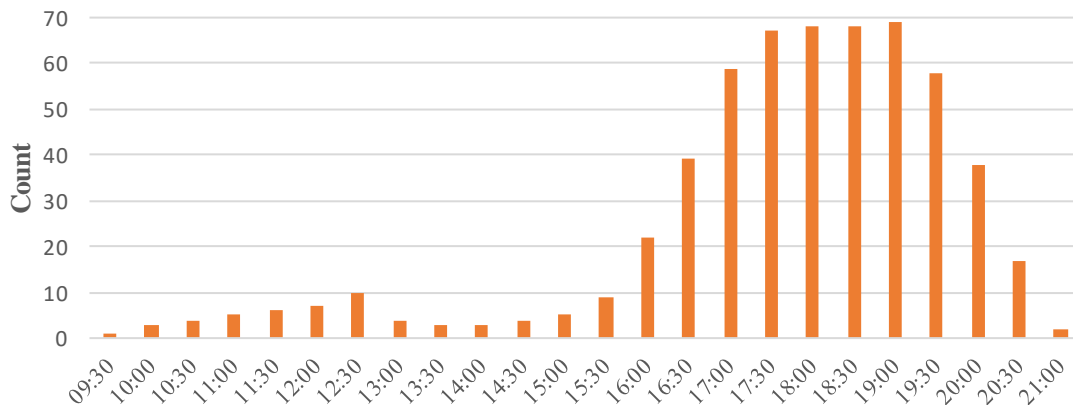
The distribution of peak hours across the day are displayed in Graph 2 below. The frequency of occurrence of peak hours can be summarised as follows:

¹ Total Electricity Requirement which is the total amount of electricity required by a country. It includes all electricity exported by generating units, as well as that consumed on-site by self-consuming electricity producers

² The Generation Capacity Statement is an annual report from EirGrid and System Operator Northern Ireland (SONI). It examines the balance between electricity demand and supply on the island of Ireland for the following 10 years and can be accessed via [this link](#). The forecast is based on a data freeze taken on March 2022.

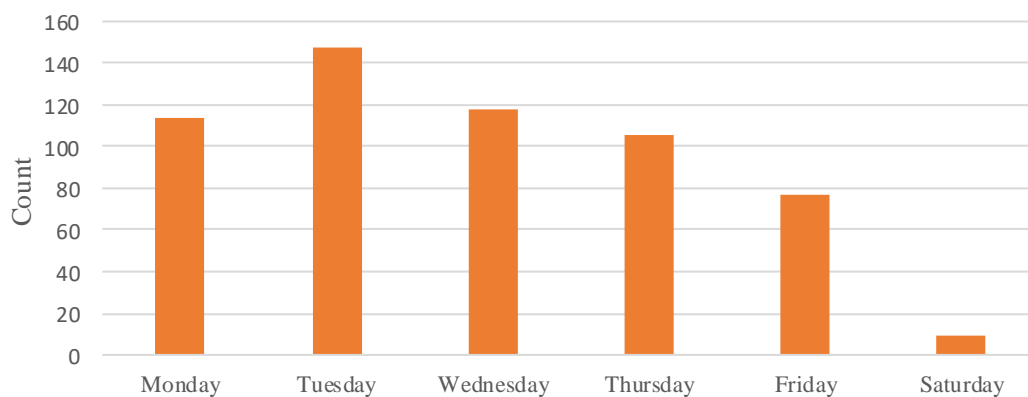
- 69% between 17:00 - 20:00,
- 11% between 16:00 - 17:00,
- 10% between 20:00 - 21:00, and
- 10% between 9:00 - 16:00

Graph 2: Distribution of top 10% demand hours over 24 hours



The distribution of peak hours across the days of the week are displayed in Graph 3. Note that the majority of peak hours are forecasted to occur during weekdays with only 1.6% of the identified peak hours occurring on Saturday and with no peak hours forecast to occur on Sunday.

Graph 3: Distribution of highest demand hours over Days of Week (top 10%)



b) Measures to achieve gross reduction of 5% during peak hours

Target Period

The target period for reduction for these measures was determined by the Working-Group to be between:

- 16:00 – 21:00, for seven days a week, December 2022 – March 2023.

This band of hours was chosen because – as demonstrated in the previous section – 90% of peak hours are forecasted to occur during this period. Saturday and Sunday were also included due to observed within-day load patterns in Ireland occurring during weekends. Meeting a lower peak demand on Saturday, Sundays or holidays can regularly require the use of high-cost marginal units. This can occur for several reasons:

- **Maintenance opportunity:** Generator outages can often only be accommodated securely on days of low average load. The absence of these generators can result in dispatch of low merit generators over peak hours.
- **Economics:** On low - average load days, base load or mid merit plant with high no-load (fixed operating) costs are decommitted. This is because it is not economic to keep them running for 24 hrs when their output is only required over a few high load periods of the day. This can result in the use of low-merit plant over the peak.

Measures to reduce electricity consumption during peak hours

Over the course of October and November 2022, a short-list of measures to achieve the reduction of 5% of consumption during peak-hours was identified by the Working Group and is outlined in Table 2 below.

Efforts were made to quantify the estimated electricity reductions however due to a variety of reason, including the short timeframe provided to identify and implement these measures, it was not possible to do so for all initiatives. Further details of all schemes are supplied in the Annex of this report.

Table 2: Estimated impact of measures to achieve gross reduction of 5% during peak hours

Measure	Timeline	Target Volume	Estimated MWh	% of Peak Reduction Target
ESB-N Beat the Peak – Domestic Pilot	Q4 2022 – Q1 2023	100,000 Households	259	0.3%
ESB-N Beat the Peak - Commercial Daily Pilot	Q1 2023	1,600 Businesses	1,440	1.9%
ESB-N Beat the Peak - Commercial Active Pilot	Q4 2022	300 Businesses	1,215	1.5%
ESB-N Beat the Peak – Conservation Voltage Reductions Pilot	Q4 2022 commencing	157 substations	21,700	28%
SEAI - Public Sector ‘Reduce Your Use Campaign’	Q4 2022	Public Sector	c.4,500	c.6%
SEAI – Solar PV Grant Scheme	Dec 2022- March 2023	N/A	1,580	2.1%
Total Quantified Measures			c.30,700	c.40%
DECC - ‘Reduce Your Use’ information campaign	September 2022 – April 2022	All energy users in Ireland	Not quantified	
CRU - ‘Peak Tariff’ decision	Q4 2022	78,591 Households and Businesses		
CRU- Advanced alert communication system	September 2022	LEUs only		
CRU - Supplier-Led Demand Reduction Initiatives	September 2022	All customers		

The above table demonstrates that the quantified reductions will achieve a c.30.7 GWh electricity savings within the specified band of peak hours. This amount represents c.40% of

the target reduction of 76.9 GWh. While it is not currently possible to estimate the effect of the non-quantified measures, it is likely that they will achieve significant reductions of demand during the peak hours specified. For example, it is expected that the scale of the Reduce Your Use campaign – as detailed in Annex 4.1 - will have a significant impact on peak consumption. However due to the novel and myriad nature of the campaign there is not yet enough empirical data to precisely estimate the effect it will have on behaviour. Similarly, the CRU decision to apply elevated tariffs at peak times (see **Annex 2.1**) is expected to have a significant but - currently uncertain - effect on peak demand.

It should also be noted that many of the measures identified in Table 2 will continue to achieve electricity savings outside of the Peak Hours period of 16:00 – 19:00. For example, once it is fully operational the ESB-N's Conservation Voltage Reduction Scheme will run 24 hours per day and is expected to achieve a total reduction of c.90 GWh by 31 March.

Moreover, several of the measures will continue to be run during the month of April 2023 and will deliver savings in addition to those quoted in Table 2 above. For instance, the ESB-N Beat the Peak initiatives will continue to work with consumers on demand shifting to encourage sustainable behaviour and the CRU's Peak Tariffs will still apply.

Furthermore, there is currently preparatory work for building on, and designing new policies to reduce electricity demand during peak times for Winter 2023/2024. For example, CRU are planning a review of the performance of ESB-N's Beat the Peak schemes and will also be working closely on building on supplier-led initiatives to reduce demand.

2. Reduction of gross electricity consumption

a) Identification of targets to achieve gross overall reduction of 10%

Calculation of the target to achieve the objective set out in Article 3 of the Regulation was conducted by ESB-N based on data provided by EirGrid. This task involved identifying the total monthly demand using system data - which was based on average 15-minute SCADA³ readings (MW) -for the relevant months (November – March) in the reference period (2017 – 2022). Averages were then taken for demand for each month over the 5 years and 10% was

³ Supervisory Control and Data Acquisition (SCADA) data is from systems which are used for controlling, monitoring, and analysing industrial devices and processes.

taken of those months to derive the monthly targets for 2022. The results from this exercise are displayed in Table 3 below.

Table 3: Benchmark: average of the previous 5 years over the same monthly period

	10% Target	5yr - Average	5yr - Growth	2022	2021	2020	2019	2018	2017
Nov	259	2,587	11%	N/A	2,737	2,584	2,603	2,546	2,465
Dec	268	2,681	11%	N/A	2,858	2,779	2,617	2,573	2,578
Jan	274	2,737	8%	2,882	2,791	2,703	2,656	2,656	N/A
Feb	252	2,519	8%	2,630	2,534	2,607	2,391	2,433	N/A
March	266	2,664	7%	2,806	2,685	2,622	2,577	2,630	N/A
Total	1,052								

The above table demonstrates that a 10% reduction in electricity consumption over the November 2022 – December 2023 period amounts to a total reduction target of 1,052GWh.

The data above also reflects the difficulty of realising demand reductions in an Irish context against an historic reference period. Contrary to the experience of other Member States, electricity demand in Ireland has been growing significantly over the past several years due to growth in energy-intensive industrial demand and population dynamics.

b) Measures to achieve gross overall reduction of 10%

This shortlist of measures was developed following extensive consultation with the Working-Group and are displayed in Table 4 below. Similarly, to the exercise conducted in the previous section, it was not possible to quantify the effect of all measures.

Table 4: Estimated impact of measures to achieve gross overall reduction of 10%

Measure	Timeline	Target Volume	Estimated MWh	% of Reduction Target
ESB-N Beat the Peak – Conservation Voltage Reductions Pilot	Q4 2022 commencing	157 substations	86,900	8.3%
SEAI - Public Sector 'Reduce Your Use Campaign'	Q4 2022	Public Sector	c.26,000-52,000	2.5% - 5%
SEAI – Solar PV Grant	Nov 2022-March 2022	N/A	8,758	0.8%
Total Quantified Measures			c.135,000	c.12.8%
CRU Supplier-Led Demand Reduction Initiatives	September 2022	All customers ⁴	Not quantified	
DECC National Retrofitting Plan	Ongoing	10.8k Sept-Dec 2022. Completions for Jan -March 2023 TBC		
DECC 'Reduce Your Use' information campaign	September 2022 – April 2022	All energy users in Ireland		

3.Compliance with Article 5

A review of the measures detailed in Section 2 and Section 3 deemed them to be in compliance with the conditions set out in Article 5 of the Regulation.

⁴ The general measure covers all customers, however suppliers will develop their initiatives based on which products and customer categories are most likely to have an impact on demand reduction. Suppliers must report quarterly on their initiatives and their effectiveness.

4. Monitoring and reporting

Monitoring of electricity consumption and of performance against the targets detailed in Section 2 and 3 will be conducted by ESB-N who will report to DECC on a monthly basis from January 2023. The data reported will feature SCADA data as these estimates will be the most readily available and will provide the clearest picture of performance against the stated benchmark targets set under Article 3 and 4 of the Regulation. This monitoring will facilitate regular and effective reporting to the Commission as required in Article 19. 3(a) of the Regulation.

Annex – Details of measures to achieve demand reduction targets

1. EBS-N Measures

Measure	Description
1.1 Beat the Peak – Domestic Pilot	<p>A nationwide domestic behaviour demand response campaign, promoting and rewarding customers who reduce demand during peak demand events, testing a mixture of personal, community and broader pro-social incentives.</p> <p>This campaign will be supported by digital elements including the provision of targeted insights into customers' electricity demand. Participating customers will receive customised information on an ongoing basis on how to shift their individual energy consumption away from the evening peak. Participating households will also receive requests to adjust their individual consumption during peak demand events, on days where there is a higher risk of an “Amber Alert” (issued by EirGrid when generation available to meet demand is tight).</p> <p>Timeline: Q4 2022 – Pilot, Q1 2023 – Scaling up</p> <p>Target: Domestic</p>
1.2 Beat the Peak – Commercial Daily Pilot	<p>A nationwide commercial demand response campaign, targeting large and multi-site commercial customers to reduce demand during peak events, in return for financial incentives in the form of direct payments.</p> <p>Timeline: Beginning Q1 2023</p> <p>Target: Commercial (medium and large)</p>
1.3 Beat the Peak – Commercial Active Pilot	<p>A nationwide commercial demand response campaign, targeting large and multi-site commercial customers to reduce demand during peak events, in return for financial incentives in the form of direct payments.</p>

	<p>An "active" campaign and a "pledged" campaign will be available, where the "active" campaign operates on baselining, measurement, financial rewards and eligibility criteria designed to maximise value for money.</p> <p>Timeline: Q4 2022</p> <p>Target: Commercial (medium & large)</p>
<p>1.4 Beat the Peak – Commercial Pledge Pilot</p>	<p>A nationwide commercial demand response campaign, targeting large and multi-site commercial customers to reduce demand during peak events, in return for financial incentives in the form of direct payments.</p> <p>The "pledged" campaign will be open to all commercial bodies and emphasises reputational incentives, to build awareness and build collective action to beat the peak.</p> <p>Timeline: Q4 2022</p> <p>Target: Commercial (all)</p>
<p>1.5 Beat the Peak – Conservation Voltage Reductions Pilot</p>	<p>Background</p> <p>Conservation Voltage Reduction (CVR) is an approach to reduce electricity demand by reducing the supply voltage customers receive. All devices which consume electricity are classified as “constant power”, “constant current” or “constant impedance”. When “constant current” devices receive a lower voltage, they operate more efficiently, thus reducing demand. When “constant impedance” devices receive a lower voltage, they operate more slowly and/or more efficiently, reducing peak demand, but consuming the same amount of energy.</p> <p>Conservation voltage reduction offers a solution to reducing peak electricity demand and improving energy efficiency. However, it is important that CVR can be implemented without compromising customers’ quality of supply. This is done by designing and operating CVR in a manner that keeps customers’ voltage within allowable limits set out in the Distribution Code.</p>

	<p>CVR in Ireland</p> <p>In Ireland, CVR can be achieved by carefully regulating the medium voltage (MV) voltages at 10kV and 20kV. When the supply voltage is lowered by a few %, some devices operate more efficiently and others operate more slowly. This has been demonstrated through R&D activities internationally. In Ireland, historical trials and more recent desktop analysis that a c. 1% demand reduction can be achieved per 1% voltage reduction. This means, pending testing and piloting, that CVR may offer the potential to contribute materially to achieving the target set out in EU Regulation 2022/1854.</p> <p>Implementation</p> <p>A pilot of CVR has been defined for winter 2022 / 2023, to test the viability and impact of CVR at a degree of scale. ESB Networks had previously planned for the introduction of CVR at scale across the Irish distribution system from 2025, with the introduction of new control room technologies, as set out in ESB Networks' Operational Systems Roadmap⁵.</p> <p>As part of an acceleration of these plans, two methods of execution are in development for this winter:</p> <ol style="list-style-type: none"> 1. Managing CVR on an active basis, turning it “on” or “off” as required from ESB Networks' National Distribution Control Centre via the SCADA remote control system, 2. Managing CVR on a continuous basis, by visiting selected substations once at the beginning of the period (December 2022 – March 2023) and updating voltage set-points on the local substation control equipment. <p>The CVR program for Winter 2022/2023 will eventually reach 157 Substations and will deliver a total GWh savings of 90 GWh by the 31</p>
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⁵ See Operational Systems Roadmap, available here: [https://www.esbnetworks.ie/docs/default-source/publications/esb-networks-national-network-local-connections-programme-operational-systems-roadmap\(2\).pdf?sfvrsn=9c2bc965_3](https://www.esbnetworks.ie/docs/default-source/publications/esb-networks-national-network-local-connections-programme-operational-systems-roadmap(2).pdf?sfvrsn=9c2bc965_3)

	<p>March. These savings will count towards the demand reduction target set under Article 3 of the Regulation.</p> <p>The savings that be achieved between the range of peak hours - as defined in Section 2 – will amount to 21.7 GWh.</p> <p>Pending program evaluation of the program, it is envisaged that the scheme will be extended for Winter 2023/2024 to include a greater number of Substations.</p> <p>Timeline: Commencing Q4 2022 and incremental build</p> <p>Target: All</p>
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2. CRU Measures

Measure	Description
2.1 CRU 'Peak Tariff' Decision	<p>For commercial consumers at a distributional level: This measure involves using peak-time price (17.00-19.00) signals to elicit a demand response. All small non-domestic customers with a smart meter and who have opted for smart services will be charged at a peak-rate that reflects a 10% differential with the day-rate. Medium sized quarterly hour metered customers will be charged a peak-rate that reflects a 10% differential with the day-rate.</p> <p>At a Transmission level: All large energy users (LEU) and XLEU customers, will see the introduction of a peak and non-peak tariff that reflects a 10% differential between the rates. As per the distribution charges, these modifications will reduce rates at off peak times, therefore ensuring that customers that have a flat load profile, and cannot shift load, will not be penalised.</p> <p>For domestic consumers: All domestic customers with a smart meter and who have opted for smart services will be charged a peak-rate that reflects a 10% differential with the day-rate.</p>

	<p>Estimated effect on electricity demand:</p> <p>Due to the limited availability of empirical evidence on similar measures in an Irish context, it was not possible to estimate the effect the short-run effects this measure will have on peak demand. There is also an assumption that suppliers pass on higher peak-time network charges</p> <p>Timeline: Launched on 1 October 2022</p> <p>Target:</p> <p>The decision will apply to c76,000 households and 2,350 businesses, the latter of which are amongst which are the largest users of electricity in Ireland.</p>
<p>2.2 CRU Supplier-led Demand Reduction Initiatives</p>	<p>The CRU has placed a requirement on suppliers to report quarterly to the CRU on the new initiatives they have introduced to reduce demand and/or increase energy efficiency.</p> <p>This will help industry identify best-practice in this area and will provide an evidence base for further measures in subsequent years. This measure will also leverage the additional information provided to suppliers and large customers and the new peak network tariffs.</p> <p>Timeline: Launched on 1 October 2022</p> <p>Target: all customer groups (excluding unmetered supply)</p>
<p>2.3 CRU – Advanced Alert Communication System</p>	<p>The CRU has placed a requirement on EirGrid to establish a communication system that alerts Large Energy Users in advance of a (potential) system alert and low SNSP event. The advanced alert communication system will allow large energy users to make voluntary demand reductions and will also allow the CRU to gauge the responsiveness of large energy users. This will inform the need and scale of future tariff intervention.</p> <p>Timeline: Launched on 1 October 2022</p> <p>Target: Suppliers and large energy users</p>

3. Sustainable Energy Authority of Ireland⁶ (SEAI) Measures

Measure	Description
	<p>Government has decided that all public sector bodies must continue to lead by example in lowering energy consumption and costs by signing up to the Sustainable Energy Authority of Ireland (SEAI) and the Office of Public Works (OPW) Reduce Your Use energy efficiency campaign for public bodies. This requires participating institutions to implement appropriate measures – details of which are available on the campaign site available on the following link.</p> <p>The scheme is expected to deliver 5-10% of energy savings overall across the public sector, and up to 15% in buildings.</p>
<p>3.1</p> <p>SEAI/OPW</p> <p>-Public</p> <p>Sector</p> <p>‘Reduce</p> <p>Your Use’</p> <p>Campaign</p>	<p>To estimate the extent of the impact of this initiative on electricity consumption, we first estimated monthly public sector electricity consumption during the 2021-2022 winter months (there is no forecasted data for Winter 2023/2024 for this sector available) using the Public Sector Monitoring and Reporting system. As these reports currently only extend until the end of 2021, we used historical monthly variation to estimate the consumption from January to March 2022. To do this we took the average ratio of monthly consumption in each of January- March over the years 2017 - 2021, to the average consumption in November and December of the years prior, and used those ratios to predict the consumption in those months in 2022.</p> <p>Using data from SEAI’s National Energy Balance⁷, we derived the average percentage of <i>electricity</i> consumed in the public sector as a proportion of the <i>total energy</i> consumption over the past five years (2021-2017). This value (48.5%) was then applied to the estimated range of energy savings (5-10% of total energy consumption) that is expected to arrive from the Reduce Your Use - Public Sector Campaign and to the monthly consumption amounts to</p>

⁶ The Sustainable Energy Authority of Ireland (SEAI) was established as Ireland's national energy authority under the Sustainable Energy Act 2002. SEAI's mission is to play a leading role in transforming Ireland into a society based on sustainable energy structures, technologies and practices. To fulfil this mission SEAI aims to provide well-timed and informed advice to Government, and deliver a range of programmes efficiently and effectively, while engaging and motivating a wide range of stakeholders and showing continuing flexibility and innovation in all activities.

⁷ Ireland's Energy Balance provides a complete overview of Ireland's energy supply by source, energy transformations, and the final energy demand by sector. The data is available [here](#)

get the estimate electricity savings from the campaign. The total amount of electricity savings estimated for the months November to March is below:

Table A.1 Electricity Savings, Public Sector Reduce Your Use Campaign (GWh)

Month	Estimated Public Sector Electricity Demand	Savings from Public Sector - Reduce Your Use Campaign	
		5% Savings	10% Savings
Nov. 2021 (reported)	215	5.2	10.4
Dec. 2021 (reported)	218	5.3	10.6
Jan. 2022 (estimated)	227	5.5	11.0
Feb. 2022 (estimated)	205	5.0	9.9
March 2022 (estimated)	207	5.0	10.0
Total	1,072	26.0	52.0

This suggests a potential range of savings of 26-52 GWh relevant to the reduction target set out in Article 3 of the regulation.

To estimate the reduction on peak hours of the Public Sector Campaign, a simple fraction of target hours (i.e. 5/24) were applied to the monthly savings range for December to March. The results are in the table below:

Table A.2 Electricity Savings during peak period from Public Sector Campaign

Month	Reduce Your Use Campaign peak hours - (GWh)	
	5% Savings	10% Savings
December 2021 (reported)	1.1	2.2
January 2022 (estimated)	1.1	2.3
February 2022 (estimated)	1.0	2.1
March 2022 (estimated)	1.0	2.1
Total	4.3	8.7

	<p>This suggests a potential range of savings of 4.3 - 8.7 GWh relevant to the reduction target set out in Article 4 of the regulation. The figure quote in Table 2 of 4.5 GWh saved therefore represents a conservative estimate.</p> <p>Timeline: The scheme launched September 2023 however the savings estimates apply to the target periods.</p> <p>Target: All public sector in Ireland</p>
3.2 SEAI-Solar PV Grant Scheme	<p>Launched in 2018, the SEAI Solar PV grant offers Irish homeowners a grant towards the cost of installing solar photovoltaics for producing electricity in their own home. The grant is paid on a pro rata basis at €900 per kWp with a maximum amount capped at €2,400.</p> <p>The Solar PV Grant Scheme is pertinent to electricity demand reduction due to its offloading effect of electricity demand from the grid.</p> <p>The estimated demand savings from this scheme is based on the following assumptions:</p> <ul style="list-style-type: none"> • The total installed domestic solar PV capacity, to our knowledge, incremented upward by the number of monthly installations recorded by SEAI's Solar PV grant programme, from April 2021 through October 2022. For November and December 2022 we also include applications received and assume these installed. For January through March 2023 we have no information on further installations so we assume no new installations. Note however that we assume each installation continues to provide offloading savings from the grid for all subsequent months. • The average peak capacity of all installations is taken to be approximately 4.5 kWp, based on average size of applications to the Solar PV grant programme over the past year. • The solar generation offloading per peak capacity is based on month-specific averaged solar irradiation data over a five-year period from

ENTSOE, the European association for the cooperation of transmission system operators (TSOs) for electricity.

- We do not have an estimate of the total number of Solar PV installations in Ireland at the start of this period, i.e. November 2021, but this is not important – we only need the increase in installations between last winter and this winter to estimate the savings this coming winter 2022 and 2023. So, we've taken April 2021 as a baseline, so that we only count PV installations that came after the baseline consumption year.

Taking these assumptions into account, the estimated total amount of electricity offloaded from the grid for the months November 2022 to March 2023 is detailed in Table A.3 below:

Table A.3 Estimated Electricity Offloaded

Month	Estimated Electricity Offloaded
November	1,167
December	849
January	1,293
February	2,126
March	3,323
Nov-March MWh	8,758
GWh savings	8.76

To estimate the reduction on peak hours of this reduction, a simple fraction of target hours (i.e. 5/24) were applied to the monthly savings figures above. The results are in the table below:

Table A.4 Estimated Electricity Offloaded during peak period

Month	Est. Electricity Offloaded during peak
December	177
January	269
February	443
March	692
Dec-March MWh	1,581
GWh savings	1.58

4. DECC Measures

Measure	Description
4.1 DECC - 'Reduce Your Use' Information Campaign	<p>Background</p> <p>'Reduce Your Use' is a nationwide public information campaign to promote and encourage efficiency and to highlight the range of supports that are available to households and businesses. The Irish government has introduced a suite of measures over recent months to assist households and businesses in coping with higher energy costs.</p> <p>The Reduce Your Use (RYU) campaign emerged from the National Energy Security Framework (NESF) which was launched in April 2022. The NESF provided an overarching and comprehensive response to Ireland's energy security needs in the context of the war in Ukraine and included a commitment for Government to "deliver transparent, timely and helpful information in relation to energy costs and security to the public during these uncertain times". The first phase of RYU – which was launched by DECC in April 2022 - ran for four weeks with ads in print, on radio and across social media, primarily focussed on the energy efficiency message.</p> <p>At the launch of the campaign in April, it was acknowledged that the campaign would evolve as needed to meet the changing information needs and concerns of the public. The current phase of the Reduce Your Use campaign – launched on 19 October - is a significant ramp up of activity for the 2023/2024 Winter season, where colder weather will mean the true effects of rising energy prices will be more apparent. The campaign reflects Government's concerns about the effects of rising energy costs and the need to generate awareness of supports that are available for households and businesses</p> <p>Objectives of Reduce Your Use Winter, 2023/2024 Campaign</p> <p>DECC – in collaboration with key stakeholders - have developed a nationwide information campaign with the following objectives:</p> <ul style="list-style-type: none"> • Educate people on how best to reduce their energy use and costs, where safe and possible to do so;

	<ul style="list-style-type: none"> • Clearly direct people to any supports that may be available to them so that they can stay “Warm and Well” this winter, particularly those that may be vulnerable; • Encourage long term sustainable behaviour as part of a new normal, in pursuit of Ireland’s sustainable energy transition; • Inform businesses of the practical steps they can take to reduce their energy use in the short term² and provide information to Small and Medium Enterprises (SMEs) on the supports available for business, particularly under the Temporary Business Energy Support Scheme (TBESS) <p>Scale</p> <p>The Winter 2022/2023 Reduce Your Use Campaign reflects a significant shift in ambition and has a €2.5 million budget and involves the participation of a range of key stakeholders across Government, energy state agencies and NGOs:</p> <ul style="list-style-type: none"> • Energy State Agencies: EirGrid, Commission for the Regulation of Utilities (CRU), Gas Networks Ireland, ESB-N and the Sustainable Energy Authority of Ireland (SEAI), • NGOs: ALONE and MAB (Money Advice and Budgeting Service), • Government Departments: Department of Enterprise, Trade and Employment, Department of Finance (including Revenue). <p>The campaign will run for 24 weeks with the possibility to extend. It will roll-out on a phased approach, and will target different audience segments, activities and types of energy demand.</p> <p>Communications are primarily conducted through advertisements placed on radio, tv, national and regional press, social media, digital audio, cinema and various outdoor spaces. It’s estimated that by the end of Q4 ’22, the ads will be seen by 75.3% of the population at least once on TV, heard by</p>
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	<p>89% on radio, 37.68% reached via press and 991,888 via cinema screens as well as achieving 1,131,423 impressions on broadcast video-on-demand (VOD) and 2124600 on digital audio.</p> <p>There is also a door drop campaign, which features an 8 page booklet in Irish and English is being delivered to every home in the country (over 2m) from the week beginning the 21 November 2022. The booklet contains practical advice on saving electricity.</p> <p>A PR company has been engaged at a cost of €25K over 3/4 months to complement the National campaign and ensure the messages of the Reduce Your Use Campaign reach as wide an audience as possible. The PR campaign will focus on securing earned media coverage, primarily on regional outlets, in an effort to inform and support citizens to reduce their energy use, stay “Warm and Well” and avail of supports where needed, using local spokespeople and case studies.</p> <p>Research conducted by Amárach Research on the 9th November on behalf of DECC found a significant increase in the percentage of people (61%) who saw and heard the RYU messaging in comparison to the previous poll taken on the 18th October (48%). The expectation is that the media campaign as a whole will reach 99% of all adults aged 18 and above.</p> <p>A partnership has also been established between DECC and ALONE to support efforts to reach older people in society. Older people are among those who are most impacted by increasing energy costs, and are most vulnerable to the health impacts of colder temperatures. Through this partnership, two extra staff members are being recruited on a temporary basis to enable the organisation to meet the increased demand to support, engage and inform this vulnerable population during Winter.</p> <p>Evaluation</p> <p>To evaluate the impact of the campaign, tracking is being conducted on a fortnightly basis to gauge consumer sentiment and to facilitate insight generation and continued message testing. In addition, a Longitudinal Behavioural Assessment will be conducted in collaboration with SEAI.</p>
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	<p>The intention is for this assessment to build on the fortnightly tracker and to prepare for the most effective use of Smart Meter data in 2023. This will commence on a monthly basis from late November/early December.</p> <p>These ongoing evaluations will allow for the pivoting of RYU messaging as required to take into consideration public sentiment and the evolving insights from research.</p> <p>Timeline: October 2022 – April 2022 (and later if required)</p> <p>Target: All of Irish society</p>
<p>4.2 DECC - National Retrofitting Plan</p>	<p>A package of supports was introduced in February 2022 to make it easier and more affordable for homeowners to undertake home energy upgrades, for warmer, healthier and more comfortable homes, with lower energy bills.</p> <p>The measures address barriers to undertaking energy upgrades (retrofits) reported by homeowners and those working in the industry. They also reflect the step-change needed – in pace and scale of delivery – to achieve the target of 500,000 home energy upgrades, to B2 Building Energy Rating (BER) standard, by 2030.</p> <p>The latest projections from SEAI indicate that the target of 27,000 home energy upgrades will be delivered by the end of 2022. This compares to 15,500 upgrades last year. There is a potentially significant electricity saving associated with incremental addition of these home energy upgrades however it was not possible to quantify this savings in time for the submission of this document to the EC.</p> <p>Timeline: November 2022 – March 2023</p> <p>Target: 27,000 home energy upgrades to be delivered by the end of 2022. Over 16,200 home energy upgrades have been completed by end of September 2022.</p>