

# UK Power Reserve's consultation response | Minded to decision and draft Impact Assessment of industry's proposals (CMP264 and CMP265) to change electricity transmission charging arrangements for Embedded Generators

## 1. Executive Summary

### Ofgem's minded-to decision harms consumers

- To implement the minded-to decision without grandfathering for CM14&15 investments is unnecessary. Rather than bringing any benefit to consumers, as Ofgem states, it in fact increases costs significantly according to Aurora's independent analysis.
- If it implements the minded-to decision, Ofgem will fail to meet its own objectives and the objectives of the CUSC which are primarily to protect consumers
- It is clear from Ofgem's own analysis that consumers have benefited from lower clearing prices in the 2014&15 capacity auctions because of investors' reliance on triad revenues. It is grossly unfair and inherently disproportionate to seek further gains for consumers in relation to CM14&15 investments at the cost of devaluing the investment made to deliver that benefit.
- The minded-to would cause very significant losses to committed projects, which would be manifestly disproportionate to the aims of the decision and would constitute an unlawful interference with UKPR's possessions in relation to its CM14/15 projects.

### Grandfathering CM 14/15 capacity (WACM13) is the solution for consumers and industry

- **Grandfathering CM 14/15 capacity results in a net system saving of ~£600m (versus the stated cost of £800m).**
- **Grandfathering:**
  - **Does not affect system costs or distort incentives for new investment**
  - **Does not distort the wholesale market** because gas recipes will still be running in merit even with grandfathered triad revenues while diesel engine run times will be materially cut by DEFRA emissions rule changes.
  - **Avoids the security of supply risk of** a proportion of CM capacity not being delivered or moving to foreign markets without grandfathering. If just 20% of CM new build capacity were lost this would cost the consumer around £250m in additional capacity market spending.
  - **Avoids the damaging outcome of higher costs of capital as regulatory upheaval and uncertainty reduces investor confidence across the sector.** A 1% increase in hurdle rate for new build recipes projects would result in an additional spending of £810m.

## 2. Context of UKPR response

UK Power Reserve is a leading provider of secure, flexible, low carbon electricity and services to the UK power market. With an 823MW portfolio of decentralised thermal power generation and battery storage assets, we help keep the country's electricity system balanced and resilient. Our fast-ramping, low-cost assets are located across England and Wales, improving competition, contributing to security of supply, and delivering better value to consumers.

UKPR's fleet provides an innovative contribution to the rapidly changing UK energy system. UKPR has invested in fast ramping gas reciprocating engine technology that can reach maximum output and efficiency in under two minutes. We are now building battery storage with immediate response times to (sub second) to system requirements. This type of innovation is crucial to the effective and secure functioning of the called-for future flexible energy system in which a greater proportion of our energy is delivered by intermittent but low carbon generators.

UKPR recognises the need to make an adjustment to triad payments for prospective and pre-CM14/15 investments. Prospective and pre-CM14/15 investments can command a higher Capacity Market (CM) price which will compensate them for the loss of embedded benefits, but the consumer benefit case for making the change has been significantly overstated. According to independent analysis commissioned by UK Power Reserve, Ofgem's analysis is fundamentally flawed and the regulator is in danger of making a decision which will act against the interests of existing and future customers. The issue of TDR payments should be dealt with prospectively in a measured, predictable and transparent manner so that all investors are clear on the regime going forward and can take this into account when making their investment decisions.

### **Materiality of the decision**

In carrying out its functions, the Authority must have regard to *"the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles that appear to it to represent the best regulatory practice."* The Department for Business Innovation & Skills published the Principles for Economic Regulation in April 2011<sup>1</sup>.

The "minded-to" is a very material decision which is not proportionate or targeted in its application with respect to CM14 and 15 assets. If acted upon, the minded-to decision:

- Will impact on payments which currently amount to £350m per annum now, rising to £650m per year in 2020/21. To put this into context, this is a more significant reduction in revenue than Ofgem determined was appropriate for the average DNO at the time of the RIIO-ED1 review. However, the RIIO-ED1 decision was taken following over two years of extensive consultation with affected parties <sup>2</sup>.

<sup>1</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/31623/11-795-principles-for-economic-regulation.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31623/11-795-principles-for-economic-regulation.pdf)

<sup>2</sup> The RIIO-ED1 Final Determination ([https://www.ofgem.gov.uk/sites/default/files/docs/2014/11/riio-ed1\\_final\\_determination\\_overview\\_-\\_updated\\_front\\_cover\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2014/11/riio-ed1_final_determination_overview_-_updated_front_cover_0.pdf), page 6) notes that the slow track companies were allowed expenditures of £17,455bn, £2bn lower than the figures set out in their

- Would inflict a severe negative impact upon certain smaller generators, causing disproportionate hardship to developers of projects that are bound into 15-year CM agreements, which are not able to alter their position for the considerable future.
- Goes further than is necessary to meet its objectives, and, in fact, will prove to be counter-productive. In particular, the decision has the potential to increase longer-term costs to consumers by reducing competition and undermining investor confidence and increasing CM clearing prices.
- In addition, due to the likelihood of needing to procure higher (replacement) target capacity in future T-1 auctions for the 2018/19 – 2021/22 delivery years means Ofgem's minded-to decision:
  - Has the potential to significantly impact security of supply as some of the generation currently contracted to come online is unlikely to deliver, requiring considerably more capacity in future T-1 CM auctions, pushing up costs to the consumer if energy security margins are to be maintained;
  - Is having and will continue to have a serious and long-lasting impact on investor confidence at a time when markets are already nervous about the implications of geopolitical developments, including a UK general election, Brexit, and recent high-profile government interventions within the renewable generation sector; it will also have a knock-on impact on other areas of investment which benefit from the confidence of investors in the stability of the GB regulatory regime;
  - Ignores the benefits flexible, efficient and fast ramping gas reciprocating engines (gas recip) provide to the energy system;
  - Will reduce competition in the generation sector itself, as well as the funding market for new projects, which may also harm investment in renewables and the Contracts for Difference (CfD) scheme.
- These impacts are severe enough individually. Combined it becomes clear that the 'benefits' to consumers identified by Ofgem in its minded-to are not only overstated at best or erroneous at worst, but there is a material risk consumers will find themselves paying more.

### **3. Case for grandfathering CM14/15 capacity**

#### **i) System costs are not impacted by grandfathering**

Ofgem's Frontier/LCP analysis recognises that system costs are not impacted by grandfathering of CM14/15.

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business plans. The average reduction in allowed expenditures across the five companies was £415mn.

*“Assuming that the generation capacity awarded contracts in the 2014 and 2015 CM auctions delivers as expected, the grandfathering options can be expected to have no material effect on the plant mix, thereby implying that the system costs are largely unchanged.”<sup>3</sup>*

*“Our modelling finds that both grandfathering of existing charging arrangements for certain plant types, and 3-year phasing in the implementation of the new regime reduce the consumer cost savings (there is no impact on system costs, as we assume no change in new build).”<sup>4</sup>*

The economic analysis underpinning the Impact Assessment is based on the view that grandfathering has no impact on the incentives for new plant to come on the system. In other words, that grandfathering doesn't create a distortion that results in the investment in or operation of less efficient investment. Frontier / LCP have confirmed that their analysis shows that the £800<sup>5</sup> million 'saving' identified as an additional consumer saving is only the NPV of the grandfathered triad payments - there is no identified distortion in investment incentives.

This view is confirmed in independent research by Aurora which shows grandfathering has a minimal impact on future system mix. With or without grandfathering, Aurora finds that 6GW of CCGT new build enters from 2021-2035<sup>6</sup>.

It is surprising Ofgem has seemingly ignored this aspect of the Frontier/ LCP analysis; indeed, Ofgem has stated the exact opposite by arguing that grandfathering is distortive and negatively impacts competition. Ofgem's qualitative statement here relates to a key element of the impact assessment and it is unacceptable that it is not clearly explained or justified.

In this context, we would remind Ofgem of the view expressed by the Competition Commission in the context of the appeal lodged by E.ON UK, which was concluded in July 2007:

*“if a CBA is to be transparent, benefits should be quantified where possible. For the same reason, qualitative benefits should be explained clearly and in detail, so that it can fairly be seen whether there is any potential overlap between the quantitative and qualitative benefits.”* (Para 6.157).

## **ii) Claimed wholesale market distortions from grandfathering CM 14/15 not substantiated**

It is incumbent upon Ofgem to demonstrate how any distortion from grandfathering would emerge and to quantify the size and cost of that to consumers compared with the cost of undermining investor confidence and the risk of non-delivery pushing up CM, ancillary and wholesale prices. Ofgem has not demonstrated how distortions from grandfathering would

<sup>3</sup> Frontier / LCP analysis page 31

<sup>4</sup> Frontier / LCP analysis page 37

<sup>5</sup> Ofgem's 'savings' identified by the IA assume that the current triad price of £45/kW will continue to increase to £72/kW by 2021. This is an uncertain assumption which has inflated the 'savings' identified in the minded-to decision.

<sup>6</sup> Aurora Energy Research System Impact Analysis of Triad grandfathering.

emerge. Instead, Ofgem's analysis includes incorrect assertions about the potential distortions caused by grandfathering.

The Ofgem minded-to decision at 6.14 states: *"The majority of savings in system cost are driven by a reduced fuel usage for power generation and some opex savings...new CCGT plant come online, replacing older and less efficient existing CCGTs. This increased efficiency leads to lower system costs overall."*

**The extent of any distortion needs to be considered separately for gas recip and diesel engines:**

### Gas recip

Ofgem has made an erroneous assertion that gas recip run out of merit order under the current triad arrangements. LCP / Frontier's modelling assumes a low rate of efficiency of 32% for gas and 34% for diesel, based on figures from the BEIS 2016 Generating Costs Report.

These estimates are representative of older technologies. Our new gas recip have efficiency factors of up to 40.5%. Below is a breakdown of the UK Capacity Reserve Ltd. newbuild gas recip technology being installed through committed investment decisions and capacity market contracted secured in the T-4 2014 auction<sup>7</sup>;

MW	Manufacturer/Model	Fuel Type	Efficiency %
240	Cummins QSV91G	Mains Gas	40.5
108	Cummins QSV91G4	Mains Gas	37.4

Furthermore, the increasing needs for flexibility in the UK energy system means that gas recip will become increasingly efficient relative to CCGTs (new CCGTs have a minimum 30-minute ramp time from spinning compared with less than two minutes for gas recip). The LCP/Frontier model finds that reserve costs fall under Scenario 3 as CCGTs are assumed have greater efficiency levels than the reciprocating engines they replace. This is an inaccurate oversimplification given that load factors will continue to fall due to continuing shifts in supply and demand across the system.

The impact of LCP/Frontier's efficiency assumptions is to reduce the proportion of the time when it is economic to dispatch reciprocating gas generators. This means that the analysis assumes such generators are less likely to be "in merit" (i.e. receiving a power price that covers short run marginal costs) at times when triad periods are likely to be called. The analysis assumes that embedded generation (EG) will be "chasing" Triads (i.e. will run whilst out of merit in order to receive embedded benefits) in a greater number of periods. This leads LCP/Frontier to overestimate both the number of hours in which EG is distorting the market and to overestimate the size of the distortions in those hours.

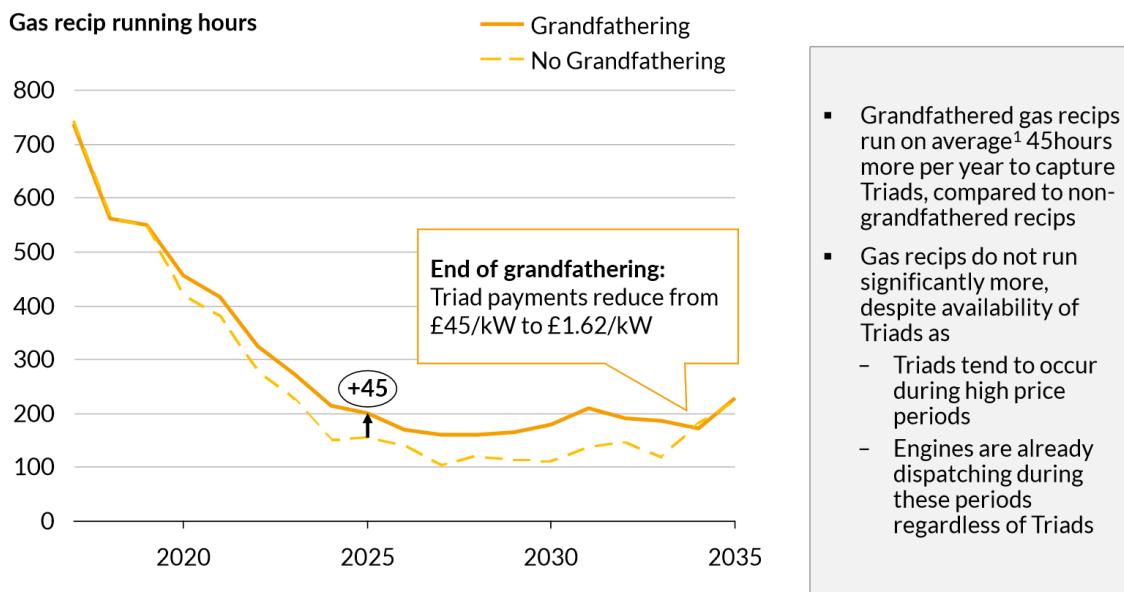
<sup>7</sup> UKPR's environmental permit for Kings Road Part A references BAT guidance and gas recip efficiency: <https://www.gov.uk/government/publications/dn40-1qt-uk-power-reserve-limited-environmental-permit-issued>

This overestimation of the distortion can be seen by looking at actual plant load factors in recent years as well as by the margins earned when running.

Aurora analysis has found that gas recipes receiving triads would run on average 45 hours more per year than those without triad benefit.

## Gas recipes receiving Triads run on average 45hours more per year than those without Triad benefits

AURORA  
ENERGY RESEARCH



This demonstrates that gas recipes do not run significantly more hours when they receive triads because, if grandfathered, the significant majority of the time gas recipes will be running in the merit order in any case. It is therefore clear that the extent of the distortion claimed by Ofgem is significantly overstated. More important than this is the analysis which demonstrates the actual impact on wholesale prices and plant mix that consumers ultimately pay for. This analysis has been carried out for us by Aurora and the results are below.

### Diesels

The March 2016 government CM consultation document (page 12) sets out the government's intention to look into emission and over compensation of diesel technology through DEFRA (emissions) and Ofgem (embedded benefits review)<sup>8</sup>.

We recognise that under the current triad regime diesels may run out of merit at times. Diesels are a small and declining capacity due to the Defra Medium Combustion Plant Directive (MCPD) and emission controls on generators aimed at improving air quality. In addition,

<sup>8</sup>[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/504217/March\\_2016\\_Consultation\\_Document.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/504217/March_2016_Consultation_Document.pdf)

DEFRA has consulted on proposals to implement emissions controls on small diesel generators, limiting running hours to 50 hours per year for new diesel generators from 2019 and for existing generators from 2025.

The analysis undertaken by LCP / Frontier has not factored-in the impact of DEFRA's proposals. While DEFRA has yet to publish a final decision the future indicative requirements are well publicised and final decision imminent with new rules applicable for T-4 diesel technology securing obligations in the T-4 2016 CM auction, we consider that these proposals should have been adopted as a high probability sensitivity by LCP / Frontier.

If DEFRA's proposals had been incorporated into modelling of the status quo, it is likely that this would have made material differences to the modelling results:

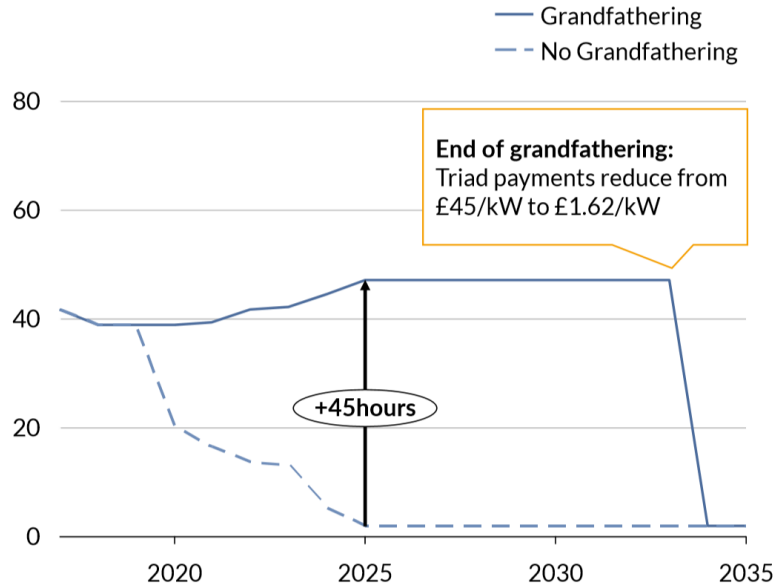
- Affected diesel generators would not have been assumed to "chase" Triads over as many hours, and so the size of the knock-on impacts on wholesale and ancillary service markets would have been considerably smaller.
- Arrangements for grandfathering of the proposals would have carried significantly less cost than modelled by LCP / Frontier. This is because diesel generators would be much less likely to be able to run in the Triad hours if their running is restricted to 50 hours per year as the timing of Triad hours is uncertain and becoming harder over time to predict.

Aurora analysis shows that grandfathering diesel would not result in diesel run-hours (Aurora estimate only 45 more hours per year) because Defra's emission limit restricts diesel's running hours.



## With grandfathering, diesel engines run on average 45hours/year more to capture Triads

Diesel running hours



- Grandfathering results in diesel running 45hours more per year to capture Triads
- Diesel's impact on peak prices are minimal due to its very low running hours of around 50hours/year
- The low running hours are a result of
  - Defra's emission limit restricts diesel's running hours
  - More efficient and lower marginal cost peakers enter, pushing diesel out of the merit order

Aurora finds that diesel's impact on peak prices would be minimal due to its very low running time of around 50hours/year.

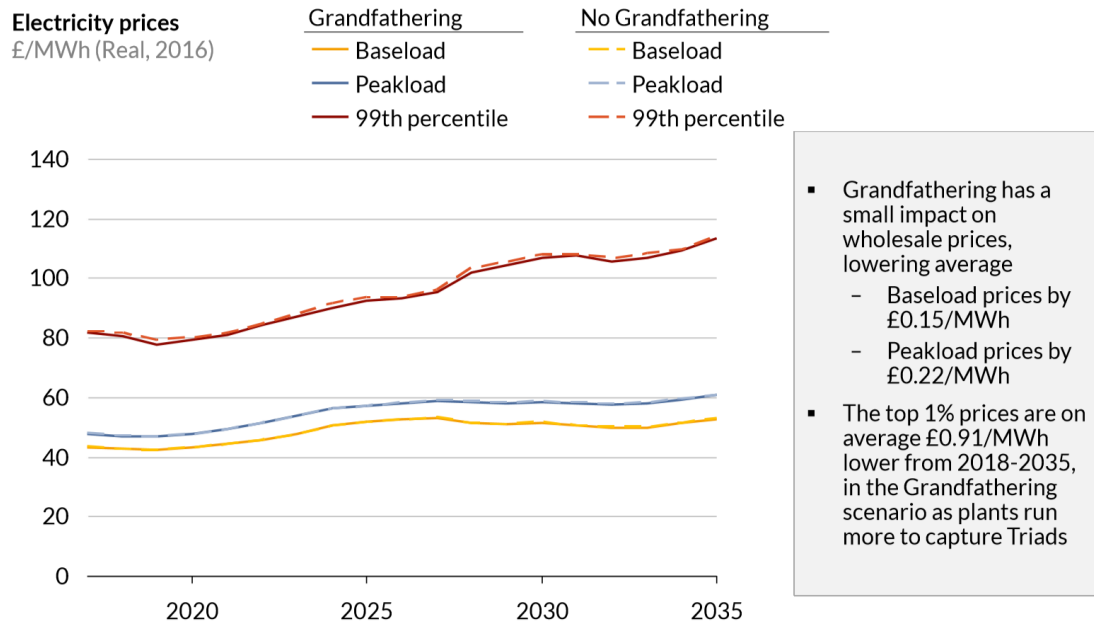
### Quantification of impact of grandfathering on wholesale market and future plant mix

The assumed distortion of the wholesale market caused by grandfathering CM14/15 gas reciprocating and CM 14/15 diesel generation is simply not supported by the facts and therefore cannot be given as a reason not to grandfather.

Firstly, long-term wholesale prices are largely unaffected by grandfathering:



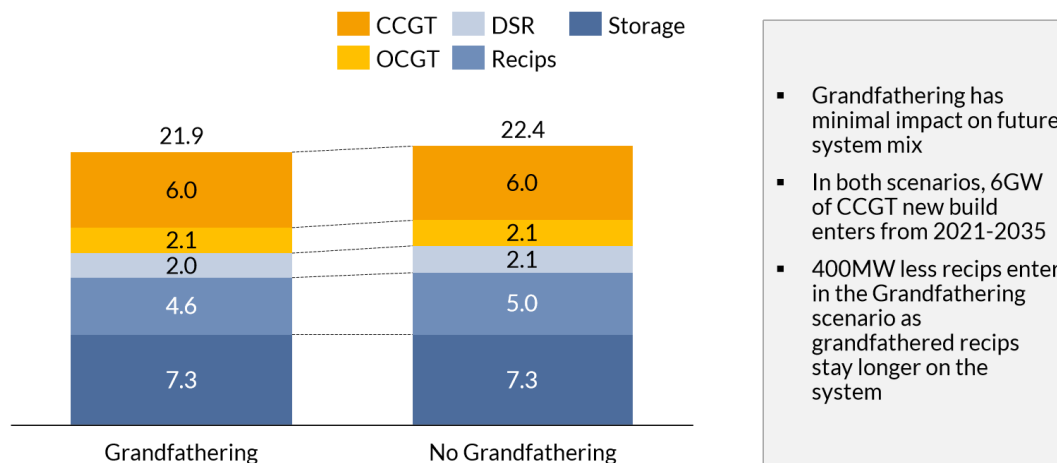
## Long-term wholesale prices are largely unaffected by grandfathering



Secondly, grandfathering has little impact on the future capacity mix:

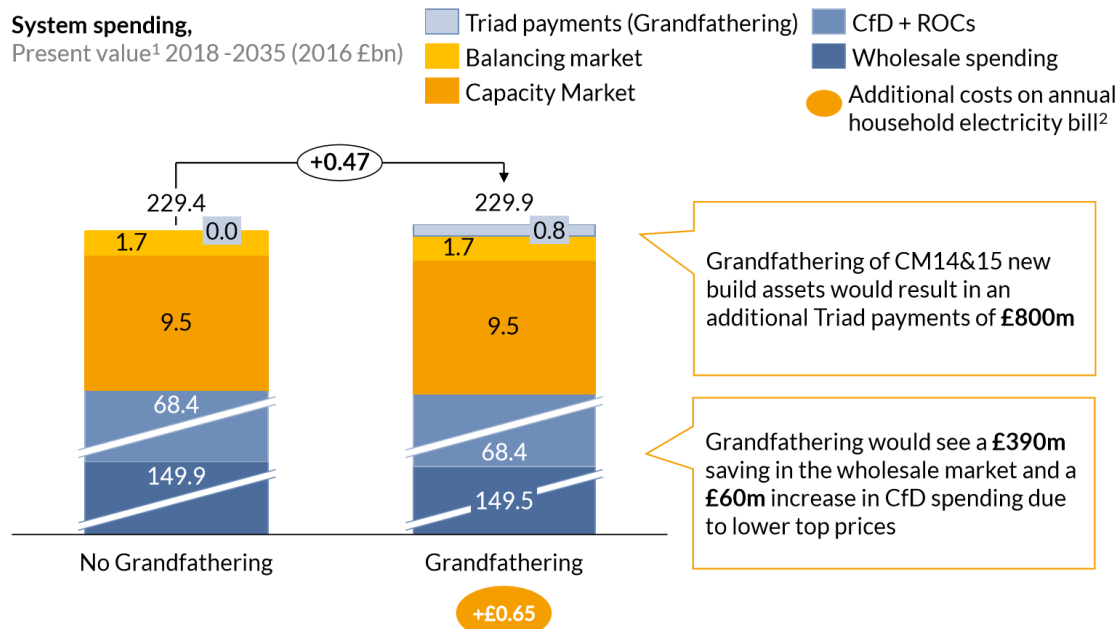
## Grandfathering has little impact on future capacity mix and CCGT new build entry

New capacity delivered by CM 2021-2035,  
GW, de-rated



Aurora's analysis shows that a significant proportion of the grandfathered £800m triad payments made over 15 years would be offset by a £390m saving in wholesale market spending due to lower top prices because of CM 14/15 generation.

## Grandfathering would result in a £470m increase in system spending, after accounting for its impact on prices



1. Present value calculated based on discount rate of 10% using 2016 Real numbers 2. Calculated assuming 33% of total UK power generation comes from domestic and 27m future households in the UK

### iii) Impact of non-delivery of CM 14/15 capacity not considered

Ofgem suggests that the proposed three-year transitional arrangements will allow investors time to adjust. Ofgem's analysis assumes that all contracted capacity will come online. Ofgem has not modelled any short-term security of supply effects (the modelling only considers the impact from 2022).

Ofgem's qualitative statement on the subject of security of supply, though not explained or justified in the analysis, does recognise that some capacity will exit the market:

*"Even in the worst-case scenario, we do not expect market exit by smaller EG to have a major impact on security of supply", (Ofgem IA, 4.85).*

### Some contracted capacity will not be built and some will leave the UK

Ofgem's modelling assumption that all capacity will be delivered is unrealistic and contradicted by its own analysis. Ofgem expects that some CM 14/15 projects will not be profitable without triad revenue and tacitly acknowledges the severity of the impact of enacting its minded-to decision by noting that some generators will leave the CM as a result of the change. Therefore, it is inconsistent not to also assume a certain level of non-delivery.

This impact, which Ofgem does not quantify, is an impact that prejudices Ofgem's and the CUSC objectives. Where parties are forced to leave the market, it is axiomatic that the change is one that erodes competition. It is also a change that reduces capacity and risks security of

supply. These impacts need to be mitigated in due course, and that will necessarily involve additional costs which will be passed on to consumers.

Not only will some of the contracted capacity not be built, but some current capacity could leave the market temporarily (mothballing due to the disruption caused by insolvency and asset resale complications) or permanently (as some assets move to overseas markets). In particular, gas recip is highly mobile assets and there are many examples of these assets moving between European markets to secure higher revenues. For example, some of UKPR's first gas recip units were purchased from the Spanish market.

An article recently published by ICIS (ICIS Power Perspective, 22 March 2017), contained the following quotes relating to the possibility of the non-delivery or relocation abroad of some of these assets:

*"I know that a lot of these projects are being touted around the industry for sale," Frontier Economics' energy director Dan Roberts said. "The investors I've spoken to have said that most of them 'just don't work' – in other words, you can't get a positive internal rate of return with any sensible assumptions"*

*"There is a strong risk the owners of these 'options' – they are not yet projects – just pay the penalty [for non-delivery] and move on," he added."*

*"One source at a commodities trading house is already banking on the fact that new-build capacity will fail to deliver: "We see a decent volume of small scale plants now for sale after the Triad announcement," he said referring to Ofgem's 1 March statement. "Much of which won't be built," he added."*

Members of the banking community have told UKPR that even though they see a future requirement for flexible plant, they anticipate that many projects will now fail to get the required funding because of uncertainty over future revenue streams. They deem it very likely that a proportion of these contracted assets will not be delivered.

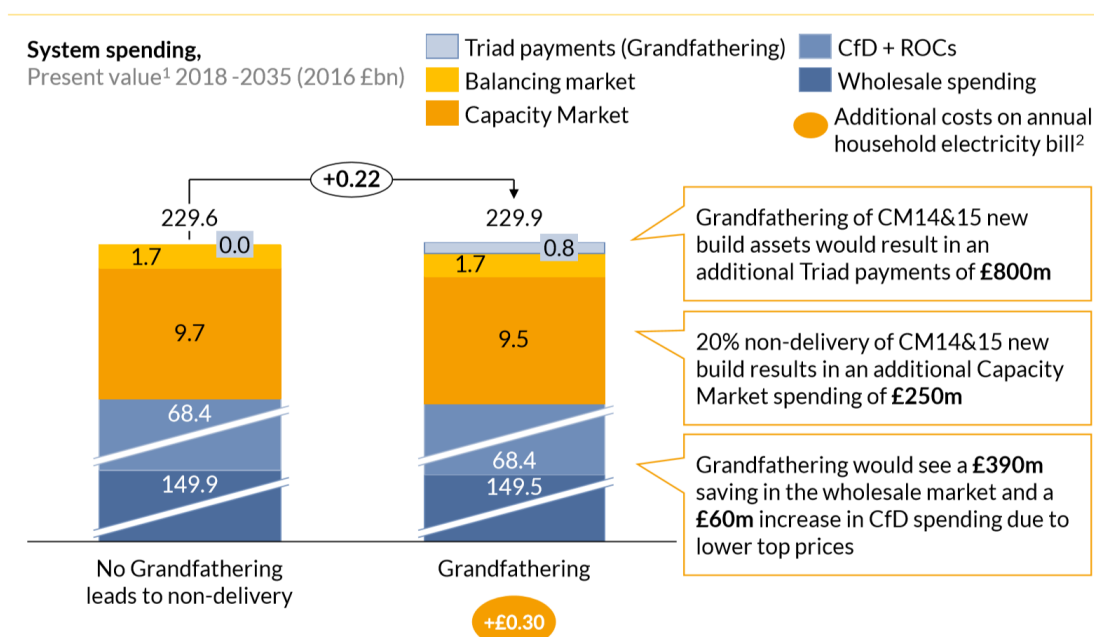
It is therefore clear that the risk of non-delivery as well as assets leaving the UK market is very real and the impact is far larger than Ofgem has assumed. Ofgem's analysis does not recognise that if any CM14/15 assets do not get built, then CM, Balancing Services and wholesale prices will rise in the short term, all of which will cost the consumer more. As a consequence, Ofgem's assessment of the benefits of the minded-to decision has significantly underestimated the risks and costs to consumers of market exit.

We recognise that it is difficult to put a figure on how much CM14/15 capacity will not deliver, but it is clearly unreasonable to assume that there will be no impact on delivery. As requested by BEIS and Ofgem, UKPR previously provided cost benefit analysis on the principle that newbuild DG secured in the 2014 and 2015 CM auctions would need to be replaced by more expensive capacity in future auctions however this evidence has been ignored or disregarded by Ofgem in its IA. Building on the evidence and analysis provided by UKPR earlier in this process - through the report that we commissioned from KPMG - we have now carried out an update and further assessment by Aurora of the impact on future CM prices as a result of non-delivery.

The viability of new build gas-recipe projects will depend on financeability. Aurora has estimated that 20% (0.5 GW) of contracted CM 14/15 new build capacity will not deliver, because with triads removed, new build entering in 2019 will not be in a position to recover its capital cost.

Aurora is aware of new build projects which have secured CM14/15 contracts and have yet to manage to secure financing. The 20% figure is derived from Aurora's assessment of the companies behind each new build project in the past T-4 CM auctions and their credibility in delivering

Aurora shows that the cost of procuring new build capacity to replace the loss through non-delivery is an average of £28million/year in additional CM spending from 2018 - 2035 with an anticipated £4.1/kW increase in average clearing price. This totals an extra £250million spend on the capacity market as a result of 20% non-delivery of CM 14/15 new build capacity.



1. Present value calculated based on discount rate of 10% using 2016 Real numbers 2. Calculated assuming 33% of total UK power generation comes from domestic and 27m future households in the UK

Adding this figure to the Aurora figure of £330 million higher wholesale price cost of not grandfathering takes leaves only an estimated £220 million cost to grandfathering without taking into account the negative impact on investor confidence and consequent higher investment costs which we will discuss below.

Clearly, there are a range of possible outcomes and the Aurora approaches is well within the bounds of reason. Our own thinking is that it is possible that up to that up to 1GW of capacity may not be available if Ofgem takes forward it's minded to decision.

In addition to the potential for increased costs as a result of non-delivery there is a genuine risk that there may be a capacity shortfall in the forthcoming T-1 auctions. Our high-level analysis suggests that this could be as big as 1.7GW in 2018/19. The following table illustrates this point:

<b>T-1 Estimated Target Capacity</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>
T-1 baseline target capacity (DBEIS set aside as baseline for additional procurement in T-1 for DSR and others)	2500	2500	2500
Ofgem gold plate (as set out in Sandbag Coal Closure Consultation Response)	1000	1000	1000
Longannet hole (As announced)	2019	2019	2019
EDF default on 3yr coal contracts (as terminated)	0	3082	1760
Trafford CCGT default (as terminated)	1656	1656	0
Newbuild 14&15 DG default (20%) (Aurora Central case on CM attrition rates)	100	277	377
Newbuild 16 DG default (assumed 20%) (Aurora Central case on CM attrition rates)	0	0	260
Unproven DSR potential to default (50%) View taken given speculative nature of DSR and v low termination costs	82.5	225	675
Newbuild batteries de-rated as Relevant Balancing Service (200MW of EFR contracts will not deliver in CM event if classed as Relevant Balancing Service)	0	0	200
<b>TOTAL T-1 CAPACITY TOP UP REQUIREMENT</b>	<b>7357.5</b>	<b>10759</b>	<b>8791</b>
Uncontracted Coal (as per CM registry and tabled in Sandbag Coal Closure Consultation response)	3316	7723	6401
Uncontracted CCGT (SBR CCGTs)	2349	2349	2349
<b>UNCONTRACTED TRANSMISSION COAL &amp; CCGT total</b>	<b>5665</b>	<b>10072</b>	<b>8750</b>
<b>Capacity Shortfall</b>	<b>-1692.5</b>	<b>-687</b>	<b>-41</b>

**Source:** Aurora and Sandbag February 2017 response to BEIS coal consultation <https://sandbag.org.uk/wp-content/uploads/2017/02/Sandbag-Coal-consultation-response-Feb-2017.pdf>

It should be noted that it is likely that at least some of the capacity that will replace the lost capacity will be coal or older less efficient CCGTs, increasing costs not only to the consumer, but also the environment.

#### **iv) Impact on investor confidence not considered**

Ofgem's IA largely ignores the potential adverse impact of the minded-to decision on investor confidence founded on reasonable and legitimate expectations.

Ofgem has recognised that investors relied on triad revenues, but the knock-on effects to wider investment decisions have been ignored in its analysis. Ofgem has only included a qualitative statement in this regard *"We expect that any increase in the cost-of-capital for smaller generation would be outweighed, not just by the consumer benefits, but by the improvement in competition"* (Ofgem 7.26). Again, we would remind Ofgem of the Competition Commission's views on the use of qualitative evidence to support regulatory decisions.

The Frontier/LCP analysis considers that removing triad revenues could have implications for investor confidence and cost of capital. Ofgem does not explicitly recognise this analysis or attempt to capture the knock-on effect on investor confidence in other parts of the energy system.

Ofgem's 2010 Project Discovery work identified a clear link between the risk of policy intervention and the willingness of investors to providing funding. Furthermore, the recent House of Commons Energy and Climate Change Committee's paper on investor confidence drew attention to the negative impact of government and regulatory action on investor confidence<sup>9</sup>:

*"...the Government's actions have clearly had an impact on the confidence of many investors". The Committee identified six factors which had "combined to damaged investor confidence", including, "There has been insufficient consideration of investor impacts, exemplified by insufficient consultation and engagement ahead of policy decisions."*

The removal of triad revenues from investors who had clearly relied on them is a material intervention in the market. Evidence of unwarranted intervention will be viewed as a signal of the willingness of the regulator to make further interventions. It is unreasonable to assume that there will be no costs and risks resulting from lower investor confidence and a correspondingly higher cost of capital as a direct result of the minded-to decision. Any fall in investor confidence can be rationally assumed to manifest in a higher cost of capital which will be passed on as a cost to consumers.

Ofgem's own strategy document underlines the importance of the regulator acting in a way that reinforces trust and confidence. The strategy sets out the way Ofgem will regulate under six headings: regulation, competition, standards, partnership, confidence and efficiency. Under the heading of confidence, the strategy states that Ofgem "will foster trust and confidence across the energy market through transparency, accountability and good regulatory processes". Amongst other things, this is to be achieved by *"building trust with a stable and predictable framework for investors, to allow innovative and efficient investment"*. We fully support this aspect of Ofgem's strategy, but consider the minded-to decision runs counter to its stated desire to building trust, and falls a long way short of being predictable<sup>10</sup>.

The significant effect that the threat of this minded-to decision is already having on investor confidence can be seen in the precipitous drop in the share price of Plutus Powergen (an embedded generator with a 200MW plus portfolio) immediately following the Ofgem minded-to announcement.

<sup>9</sup> House of Commons Energy & Climate Change Committee, Investor confidence in the UK energy sector, 1 March 2016,

<https://www.publications.parliament.uk/pa/cm201516/cmselect/cmenergy/542/542.pdf>,

<sup>10</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2014/12/corporate\\_strategy\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2014/12/corporate_strategy_0.pdf)



### 3 Month Plutus Pwrgen Share Graph



Following the 1 March announcement of the minded-to decision the Plutus Power share price fell from £2.43 to £1.38 and then fell further to settle at a significantly lower price.

(Plutus Powergen is an AIM listed company).

This chart is important because it is one of few pieces of actual data that is driving investor perception around the investibility of distributed generation. This company is the only listed company in the distributed generation sector, and therefore the perception of the movement in this share price is certainly likely to decrease investor confidence for investors in decentralised power.

In addition, members of the banking community have said quite clearly to UKPR – and, we understand, directly to BEIS and Ofgem – that the minded-to decision, if made final, will have a major impact on investor confidence. They explain that the repercussions will be both a hike in required rates of return as well as reduced levels of gearing. When asked about the plausibility of a 1-2% increase in hurdle rates, they agreed that this was a reasonable assumption. They find it particularly concerning that this proposed change comes before the first new investments encouraged by the capacity mechanism have even got off the ground. So the banks have no way of even assessing the operating track record of these assets which are a new technology to many lenders. All of this leads to a worrying and material increase in uncertainty. Even though the banking community sees a future requirement for flexible plant, it anticipates that many projects will now fail to get the required funding because of uncertainty over future revenue streams. They deem it very likely that a proportion of these contracted assets will not be delivered.

Moreover, the uncertainty created by this minded-to decision would likely not be quarantined to the capacity market. The cost of capital implications would be felt more widely across the energy sector. It is reasonable to expect that this intervention will have implications for renewables as well as on new technologies like battery storage in the capacity market. If this is the case, then the incremental increase in the cost of capital percentage would need to be much smaller to negate the suggested £800m “saving” of not grandfathering.

We recognise that it is difficult to quantify the impact of the “minded-to” decision on investor confidence and therefore on the cost of capital, but Ofgem must do more to seek to quantify these costs to the consumer.



The Frontier analysis identifies that a 1.7% increase in cost of capital would be required to negate the £800m “saving” from removing the £45 grandfathered embedded benefit amount. We argue that a 1.7% increase is certainly within the bounds of possibility and should not be dismissed. Moreover, for Scenario 2, the Frontier analysis identifies that only a 1.0% increase in cost of capital would be required to negate the savings.

Implied hurdle rate increases for Grandfathering Option A, without phasing

Scenario	Consumer saving (£mn), calculated as the difference between Option A and the scenario without grandfathering	Hurdle rate increase required to offset benefit
Scenario 1	£0	0.0%
Scenario 2	£400	1.0%
Scenario 3	£800	1.7%

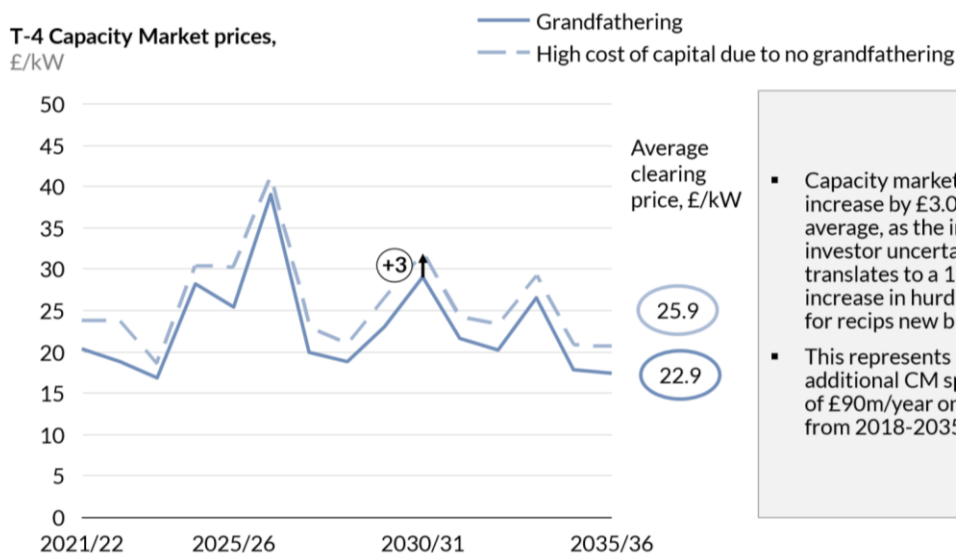
Aurora has considered the range of hurdle rates required for different investments in energy, with different risk profiles. It is evident from this analysis, that a 1-2% increase in the hurdle rate due to a higher perception of risk of regulatory intervention is entirely credible.

Aurora finds that a capacity market price increase of £3/kW on average, resulting from the increased investor uncertainty translates to a 1% increase in hurdle rate for recips. This would represent an additional average CM spending of £90mill/year from 2018-2035.

### A 1% increase in hurdle rate results in average Capacity Market price to increase by £3.0/kW

AURORA  
ENERGY RESEARCH

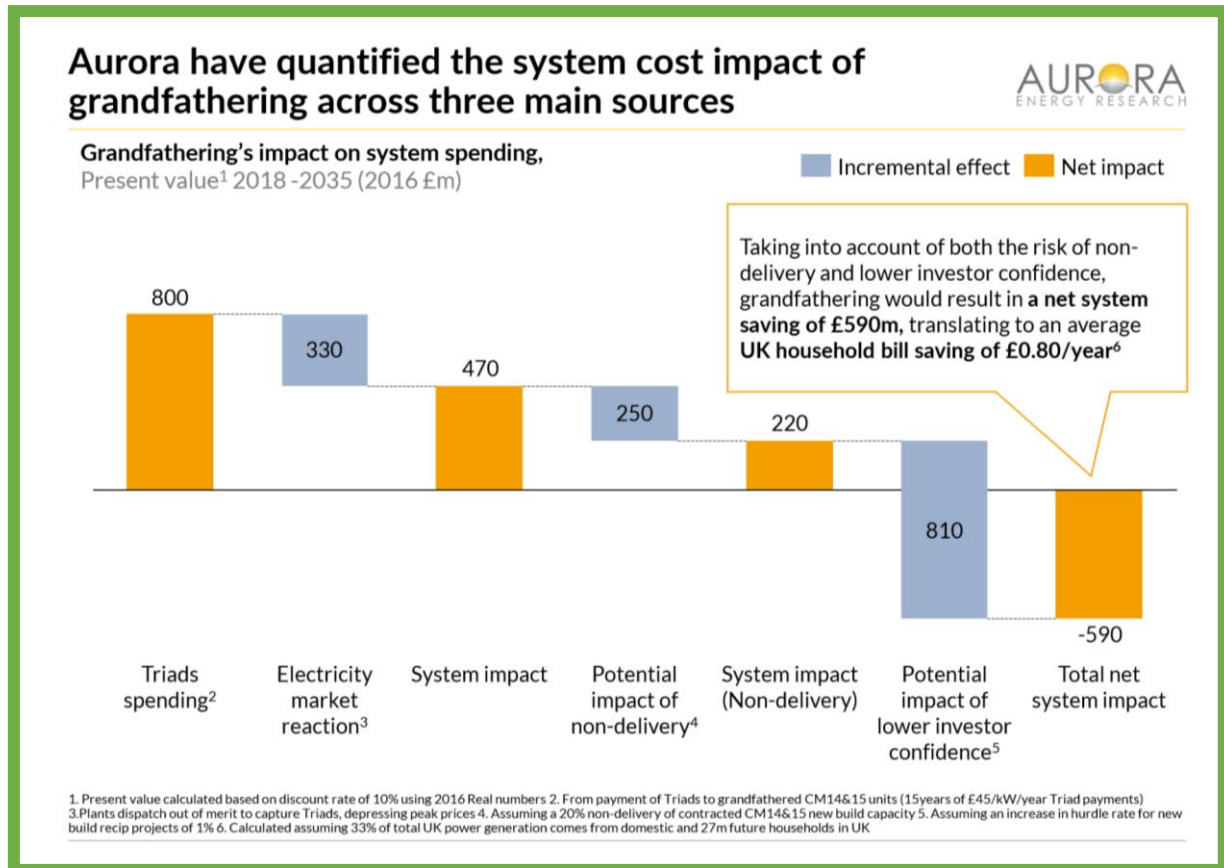
T-4 Capacity Market prices,  
£/kW



- Capacity market prices increase by £3.0/kW on average, as the increased investor uncertainty translates to a 1% increase in hurdle rate for recips new build
- This represents an additional CM spending of £90m/year on average from 2018-2035

## Overall impact of grandfathering CM14&15

Aurora finds that a 1% increase in hurdle rate for new build, along with a 20% non-delivery of 2014-15 CM capacity would turn an estimated £800m 'cost' of grandfathering, into a £600m saving for consumers.



Therefore it is clear that the case for grandfathering of CM14&15 contracts at £45/kw (as per WACM13) is in the interests of consumers.

### v) Precedents for grandfathering

UKPR has already provided (in previous stage of consultation – September 2016) evidence of relevant precedents for grandfathering. None of this evidence has been referenced in Ofgem's impact assessment and the one example cited by Ofgem is entirely inappropriate. The CM supply levy decision to not grandfather was one that UKPR supported because our investors had not relied in that instance on the revenue stream in question. Therefore, it is not at all a similar case, and should not be used as a comparison to this situation where clearly, investors did rely on the triad revenue stream.

## **vi) Ofgem has identified that administration of grandfathering not significant**

In their assessment of grandfathering Ofgem state that:

*“4.66 Where there is different treatment of new and existing users and therefore different regimes applied to existing and new embedded generation, this is likely to lead to some additional administrative burden of an enduring nature.”*

Later in the IA Ofgem states that any extra administrative burden would be “relatively small”.

*“4.90 Although there is likely to be a relatively small increase in administrative burden through grandfathering, it is the impact on competition and cost reflectivity, when compared to the other proposals, which means these options are less likely to best facilitate the objectives.”*

Therefore, any administrative burden that arises because of grandfathering is small and would not of itself constitute a reason not to grandfather CM 14/15 capacity.

UKPR was involved in the CMP264/265 legal text working group and in discussions within this group, and with Elexon, it was found that introducing grandfathering arrangements was not difficult or expensive. In fact grandfathering a small subset such as 14/15 EMR would represent approximately 200 easily identified meter points where a legal and public register is currently available and maintained for reference by any party.

## **vii) Unfair expropriation of the value of CM 14 and 15 contracts**

UKPR entered into a number of CM agreements following the 2014 and 2015 auctions. These are now binding for 15 years, on top of the allowed four years’ development time, and are subject to significant penalty termination fees. The bid prices calculated for these auctions were based on a legitimate expectation that embedded benefit revenue would continue at a sensible level, that any such review of these provisions would be proportionate, and any changes would be lawful, equitable, and handled in line with the government’s own guidance on economic regulation; a position that has been held by a significant number of participants in the market.

Ofgem’s minded-to analysis of the impact on CM prices following the removal of triad clearly demonstrates that consumers have benefited from a low CM price in CM 14/15 because of investors’ reliance on triad income. To impose the triad cut on the holders of CM 14/15 agreements is a disproportionate and unnecessary transfer of wealth from investors to consumers. Unnecessary because, as demonstrated above, the claims that grandfathering would materially negatively distort competition and wholesale market prices are unfounded.

The ‘minded to’ position on grandfathering is inconsistent with Government’s and Ofgem’s previous view of CM 14 and 15, that the results were not only beneficial in keeping consumers’ bills low, but would guarantee security for supply.

Both Ofgem and the then Department for Energy and Climate Change celebrated the success of the CM 14/15 auctions, both in terms of delivering lower costs for consumers than were expected and for bringing on flexible generation:

DECC CM press release 19 December 2014

*“The outcome is great news for consumers as fierce competition between participants has driven down costs below expected levels. The result will ensure that enough of our existing capacity will remain open at the end of the decade as well as unlocking new investment, including a large independent gas plant at Trafford.*

*Ed Davey, Secretary of State for Energy and Climate Change, said:*

*‘This is fantastic news for bill-payers and businesses. We are guaranteeing security at the lowest cost for consumers. We’ve done this by ensuring that we get the best out of our existing power stations and unlocking new investment in flexible plant.’<sup>11</sup>*

Ofgem annual report on the capacity market 19 June 2015

*“49.3GW of capacity was procured in the 2014 T-4 auction at a clearing price of £19.40/kW/year. This price was below many forecasters’ expectations, which may have been the result of a number of factors, including higher than expected competitive pressure amongst existing plant to avoid closure and new capacity having lower than expected entry costs.*

*Over 2.6GW of new generating capacity won agreements, despite the clearing price falling significantly below the Government’s estimated net cost of new entry of £49/kW/year. This new capacity included many distribution-connected reciprocating engines, which tend to have relatively low up-front investment costs but higher running costs.”*

*There are a number of reasons why this (the lower CM price) might have been the case. Each of these factors creates downward pressure on the capacity price and might have been underestimated by forecasters.*

*□ Expected energy market revenues: Bidders expectations of energy market revenues in the delivery year could have been higher than originally estimated. This could lower the need for capacity payments, reducing bids in the auction.”<sup>12</sup>*

Despite the above, the minded-to decision suggests that it is acceptable for consumers to benefit from these low CM14 and 15 prices (subsidised by our investors) and then to remove the very revenue streams that investors relied upon to achieve that low CM price, even before CM 14 and 15 assets are even operational.

<sup>11</sup> <https://www.gov.uk/government/news/first-capacity-market-auction-guarantees-security-of-supply-at-low-cost>

<sup>12</sup> [https://www.ofgem.gov.uk/sites/default/files/docs/2015/06/annual\\_report\\_on\\_the\\_operation\\_of\\_the\\_cm\\_final\\_0.pdf](https://www.ofgem.gov.uk/sites/default/files/docs/2015/06/annual_report_on_the_operation_of_the_cm_final_0.pdf)

We consider it fundamentally unfair that CM14/15 contracted parties are, in effect, subsidising lower costs to consumers. All other participants can update their trading position in the short to medium term, such as bidding at higher levels into later CM auctions, whereas CM14 and 15 holders cannot. This amounts to a retrospective expropriation of the value of our business and of the other businesses which invested in CM 14 and 15.

The minded-to decision states that it would be unfair to new entrants if CM 14 and 15 were grandfathered. That is clearly not so. A prospective change has less scope to be unfair than one that adversely impacts arrangements into which investors had already entered, devaluing them. New entrants can mitigate the 95% reduction in triad payments by making higher bids in future CM auctions. CM14 and 15 contracted parties are locked into its terms and can do nothing to mitigate the impact of the triad cut.

In fact, in our view, the unfairness lies in the fact that new CM entrants will be better off than “first-mover” 14 and 15 contracted parties. This sets a dangerous precedent, creating a perverse incentive where those who enter the market early lose out while those who are slow to enter or who wait are rewarded.

### **FOI request in relation to the functioning of the CM**

We highlight here that we submitted a Freedom of Information request to BEIS asking for information relating to the Government’s understanding of the Capacity Market and how embedded benefits might affect the functioning of the market.

BEIS have sent us an extract from “*an annex to the State Aid notification document of 2014 relating to treatment of DSR in the Capacity Market*”.

Extract:

*“Annex I - Additional information sought by the European Commission on [redacted] Openness to substitutable technologies - savings on transmission and distribution*

*...*

*It is important to note here that embedded generators also bring the same transmission benefits as DSR and that the GB system already gives extensive embedded benefits, including the ability to participate in Triad Avoidance[footnote].*

*Footnote: Energy suppliers are charged for the costs of the Transmission system according to their share of demand at peak times in winter. Triad avoidance is reducing their share of these costs by contracting with DSR and embedded generation to reduce energy use or generate at peak times.”*

This government document relating to the functioning of the Capacity Market explicitly acknowledges that embedded generation earns embedded benefits, specifically “triad avoidance” revenues and goes on to explain how they are earned via a supplier. This demonstrates that in 2014 the then Department of Energy and Climate Change was well aware that triad revenue is a revenue stream open to embedded generators and would be factored into their bids into the capacity market.

Therefore, not only did DECC believe that triad revenue was an important revenue source for distributed generators, but also that it was entirely reasonable for the market to read into such an obvious DECC mind-set that the risks of relying on EBs was low, and that it was entirely legitimate for a prudent investor to include such revenue in its bid strategy. For Ofgem to now remove this benefit without grandfathering is irrational.

Interfering in this manner to affect our 2014 and 2015 CM contracts could amount to an unjustified interference with our contractual possessions, thereby violating Article 1 Protocol 1 of the European Convention on Human Rights which takes effect in domestic law through the Human Rights Act 1998.

#### **viii) No assessment made of the impact on CM 14 /15 affected parties**

An analysis of the “fairness” of Ofgem’s intended action, is entirely absent from Ofgem’s impact assessment. Ofgem is in danger of making precisely the error highlighted by the House of Commons Energy and Climate Change Committee in its report on investor confidence: of failing to give “*insufficient consideration of investor impacts*”.

Ofgem’s impact assessment is concerned with the effect the proposed changes will have upon the market, and does not explicitly consider the impact upon CM 14 and 15 contracted parties, and, therefore, whether the damage inflicted is proportionate to Ofgem’s aims.

The distributional analysis set out in the IA is wholly inadequate. The analysis is undertaken across broad categories of generators but it does not include an analysis of how CM 14/15 contracted parties are affected. It is clear that CM 14/15 capacity will be disproportionately affected by the decision.

#### **Three-year transition period not beneficial for CM 14/15**

At this point we draw attention to Ofgem’s assertion that a three-year transition period to phase in the removal of triads “will minimise short term security of supply pressures”. Yet there is no evidence put forward to explain why three years would be a sufficient time-period for investors to be able to react to the decision or to explain what reaction businesses could actually achieve in these circumstances. Of particular note is the fact that CM agreements entered into in 2014 and 2015 will not benefit at all from the phased introduction of the cut to triad payments. By the time the generating stations are commissioned, the full 95% cut to triad payments is likely to be in force. Ofgem considers that this transitional arrangement allows market participants time to adapt to the new conditions, but entirely disregards that those holding CM agreements from 2014 and 2015 are incapable of doing so.

#### **ix) Conclusion on grandfathering – fair and in consumers’ interests**

Contrary to the claims in the Ofgem impact assessment, grandfathering for CM14/15 does not create material distortions or impact on competition. Therefore, there is no argument for removing triad payments which were relied upon by investors and which reduced the CM price in CM14&15 for consumers.



Furthermore, the fact that there is a risk of non-delivery of capacity and reduced investor confidence will add to the consumer bill, makes it clear that consumers will lose out if Ofgem do not provide grandfathering protection for CM14/15 assets.

A decision not to grandfather CM 14/15 capacity flies in the face of the stated intention of Ofgem and government to promote innovation and a flexible energy system. By not grandfathering, committed CM14/15 capacity is disproportionately and unfairly impacted by the minded-to decision, despite this capacity being some of the CM first movers and innovators.

All of these points have been backed up and verified by third party, independent consultants. Their views are based on running their models to understand the extent of distortions and impacts on CM pricing. This analysis has looked at issues that the LCP Frontier analysis failed to consider. The results are clear that consumers are better off if grandfathering of CM 14/15 assets at £45/kw as per WACM 13 is put in place compared with the consumer benefit of WACM4.

#### 4. Procedural and legal issues

##### i) **The Ofgem minded-to decision falls short of the standards required by the Principles of Economic Regulation and those expected by Parliament**

Ofgem is one of the regulatory authorities within the scope of the Principles of Economic Regulation of April 2011. Two of these principles are predictability and efficiency, and it is entirely legitimate for industry participants to expect Ofgem decisions to follow these principles.

The principle of predictability is defined as follows:

*“the framework for economic regulation should provide a stable and objective environment enabling all those affected to anticipate the context for future decisions and to make long term investment decisions with confidence.”*

*“the framework of economic regulation should not unreasonably unravel past decisions, and should allow efficient and necessary investments to receive a reasonable return, subject to the normal risks inherent in markets.”*

Ofgem’s “minded-to” decision was not “predictable” in the way foreseen by the Principles of Economic Regulation document. Over the last decade there have been four major reviews of embedded benefits, the latest of which was conducted by National Grid which concluded in April 2014 that it would not recommend changes to embedded benefits at that time. One of the key reasons cited for this was that it did not want to undermine investor confidence<sup>13</sup>. Why would investors conclude at this point that triad revenues would be wiped out almost entirely by the time that their investments came to market? Clearly investors did not assume this – hence the lower CM prices.

<sup>13</sup> <http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Transmission-Network-Use-of-System-Charges/Embedded-Benefit-Review/>



In the assessment of the CM against state aid criteria by the European Commission, it was understood that ‘Triad Avoidance’ was an embedded benefit in which investors participated. Therefore, if at this time, ahead of the CM14&15 auctions, Ofgem considered that these income streams should not be relied upon in the CM (which was specifically designed to encourage revenue stacking) then a prudent regulator which had foreseen a dramatic change in triad revenues should have commented on the National Grid conclusions in this review – ahead of the CM14 auction.

#### CM revenues should be augmented by other revenue streams

The Capacity Market was designed and implemented to secure supply for GB at the lowest possible cost to the end consumer. It has been quite clearly established that Capacity Market revenues should be complemented by other revenues streams. In a letter on 28<sup>th</sup> October 2014, Ofgem set out its commitment to a package of reforms to the electricity balancing and settlement code. Within this statement Ofgem gives a clear indication that forecast revenues are in important consideration of any Capacity Market bid and that the reforms being made should be factored in:

*“As a result of the EBSCR reforms, participants should need to recover less ‘missing money’ through capacity payments and therefore lower their bids in the Capacity Market auctions. Given the EBSCR’s high likelihood of introduction, we strongly advice participants bidding into the Capacity Market auctions in December 2014 to factor in the expected impact of EBSCR. This will ensure efficient auction results and the avoidances of unnecessary costs for consumers in winter 2018/19”*

There was no such steer from Ofgem or Government with respect to triad revenues, even though they were well understood as an ‘embedded benefit’ and significant revenue stream for embedded generators. Indeed, the above statement reinforced the point to embedded generators that other revenue streams absolutely should be factored into CM pricing.

Therefore, based on a prudent analysis of the investment landscape, including National Grid’s 2014 review we, along with many of our competitors bid into the CM 14/15 auctions with legitimate expectations that the triad revenue regime would not change rapidly and unexpectedly. Ofgem’s minded-to decision to almost wipe-out triad revenue within three years was not foreseeable or predictable by any prudent investor in 2014 and ‘15, the time of our investments. At that time, the now visible huge increase in future triad revenues was not forecast and did not present as a risk to the viability of the triad regime. Ofgem presents no evidence to explain why investors should have predicted a change in the triad regime against the backdrop of several reviews that concluded the regime should not be altered.

Ofgem’s proposed approach does not allow us to receive reasonable return on our investments and goes well beyond the normal risk inherent in the markets. Therefore, Ofgem’s proposed approach to CMP264 and CMP265 falls well short of the Principles of Economic Regulation and Ofgem’s own duties, including “*the need to secure that licence holders are able to finance the activities which are the subject of obligations*”. Such obligations would include those implied by CM1 14/15 contractual provisions

If the minded-to decision is implemented, it will exclude grandfathering for CM14/15 contracted

parties. This is having, and will continue to have, severe adverse impacts on investor confidence, as we describe below, because investors will be unable to trust Government not to act to devalue their investment after it has been committed. This outcome is incompatible with the provision of a stable and objective environment that enables all those affected to anticipate the context for future decisions and to make long term investment decisions with confidence.

The principle of efficiency is defined as follows:

*“policy inventions must be proportionate and cost-effective while decision making should be timely, and robust”*

The exclusion of grandfathering breaches the principle of proportionality. For the sake of some predicted, but fundamentally uncertain, additional gain in terms of reduced costs to the consumer, Ofgem proposes to inflict the certainty of severe impact upon CM 14 and 15 contract parties.

Disproportionality arises because the impact upon CM 14/15 contract parties is extremely severe and leaves them with a choice between continuing what will now become potentially commercially unviable projects, or suffering penalties for exiting the market. In contrast, the additional benefit to the consumer is questionable, in that:

- a) The consumer has already benefited from the bid level and clearing price of the CM 14 and 15 auctions. It is unfair and inherently disproportionate to seek further gains for the consumer in relation to CM 14 and 15 at the cost of devaluing the investment made to deliver that benefit.
- b) As we explain above, the minded-to decision represents an increased risk that investments will be subsequently devalued by policy changes. This will inevitably cause the cost of borrowing to rise and, as Ofgem’s Frontier/LCP analysis recognises, the increased cost of capital will reduce the projected consumer savings; a 1.7% increase would entirely negate the projected £800M “saving”, or may lead to an increase in consumer costs. This increase in cost of capital could also spread beyond just the CM, and increase costs in other energy development areas such as renewables and the CfD scheme, pushing up consumer costs further still.
- c) Also, as we state above, the change would likely result in a loss of capacity. The extra capacity will need to be found, or, rather, incentivised, and probably at greater cost than grandfathering to maintain the current capacity commitment. This cost will have to be passed on to the consumer.

It cannot be said in these circumstances, that the change is proportionate. Ofgem’s intervention without grandfathering is not in the public interest and therefore is in conflict with the Principles of Economic Regulation. Such a change would certainly be considered an irrational, unreasonable and disproportionate unravelling of legitimate past investment decisions.

ii) **Ofgem's Impact Assessment falls well short of the standard required for a decision of this importance.**

Drawing on Treasury and National Audit Office guidance on best practice for Impact Assessments, and on Ofgem's Impact Assessment guidelines, the table below illustrates how the Impact Assessment measures up against 11 characteristics of best practice. We conclude that the Impact Assessment falls a long way short of best practice in a number of important areas.

### Impact Assessment Best practice-comparison to Ofgem minded to decision IA

Best practice characteristic	Details	Assessment
<b>Identification of issue / Justification of intervention</b>	Is the rationale for intervention clear? Are the proposed changes consistent with the regulator's policy objectives?	Amber Whilst the rationale for the intervention is clear, the analysis places insufficient weight on the implications for security of supply and on investor confidence.
<b>Defining and consideration of options</b>	Has consultation tested the feasibility of options presented? How robust was this process?	Amber Although the CUSC modification process allowed the identification of a number of options, the process prevented smaller players from tabling options that might have been preferred to the options now under consideration.
<b>Assumptions</b>	Are assumptions clearly laid out? What are the significance of those assumptions? Does the IA present supporting evidence and/or analysis on assumptions?	Amber The IA describes the key assumptions, but the way in which the model uses these is not clear. Some, but not all of the assumptions are supported by evidence. In particular, the assumptions on gas-recip efficiency are not supported by our evidence.
<b>Methodology</b>	Is it up-to-date with current research/theories (e.g. adoption of behavioural economics)?	Green
<b>Scope of costs and benefits analysis</b>	Does the IA quantify the impacts in a comprehensive way?	Red The IA does not quantify all of the consequences. Notable omissions include the impact on security of supply and

Best practice characteristic	Details	Assessment
		investor confidence. Also, the IA fails to quantify the beneficial impact of embedded generation on transmission and distribution costs.
<b>Monetisation of costs and benefits</b>	<p>If so, is the methodology thorough and clear?</p> <p>If not, how appropriate is their qualitative assessment?</p> <p>Are there additional factors that cannot be monetised but are still significant?</p>	Red The IA notes a number of qualitative impacts but does not seek to quantify these impacts.
<b>Outlining of risks/ uncertainties</b>	<p>Does it provide a range of estimates for potential unintended effects?</p> <p>Does it give enough attention to the major (technical, political, etc) uncertainties upon which the success depends?</p>	Red The IA gives inadequate consideration to the impact on short term security of supply.
<b>Sensitivities testing</b>	<p>What happens when the assumptions don't hold?</p> <p>Were different scenarios considered?</p> <p>What are the limitations to the analysis?</p>	Red Whilst the Frontier / LCP analysis included a number of scenarios, there is no attempt to test boundary conditions (the range of circumstances within which the conclusions of the analysis would no longer apply).
<b>Considers distributional impact</b>	<p>Does it identify how the costs and benefits accrue to different groups in society?</p> <p>Does it consider the welfare effect?</p>	Red The IA does not include any assessment of the impact on embedded generators with CM 14/15 contracts. These are the parties who would be most impacted by the minded to decision.
<b>External validation / quality review</b>	<p>Has it been externally validated / reviewed? (e.g. Academic panel, Previous studies)</p>	Red There has been no independent review of the IA results.
<b>Transparent / credible</b>	<p>Has the Impact Assessment been consulted upon and/or received feedback?</p>	Red The time allowed for interested parties to respond to the consultation is shorter than

Best practice characteristic	Details	Assessment
governance process		implied by best practice and Ofgem's guidelines. The late publication of the Frontier / LCP analysis and the decision to only extend the consultation period by a week.

The IA is selective in the way it measures each of the options against relevant considerations, and it is based on crude and incomplete analysis. Most notably, it does not include an analysis of how the decision relates to all of Ofgem's duties. The IA overly simplifies a complex situation by using a crude assessment of whether options meet specific criteria (typically a simply "yes" or "no") rather than recognising that the options lie on a graduated spectrum consistent with Ofgem's decision criteria.

If Ofgem had carried out a full relevant assessment of the WACMs in relation to its duties the proposed outcome would have been different. For example, there are several impacts which are very material in the context of the assessment, but which remain unquantified, partially quantified, or not sufficiently explained in Ofgem's IA. As an illustration, the table below provides a high-level assessment of WACM 4 and WACM13 against both the CUSC objectives, and Ofgem's (relevant) wider duties. Similar to Ofgem's assessment, we indicate where the option is *likely* to deliver an outcome that is better or worse than the status quo (or neutral) in terms of facilitating the relevant objective or duty. It clearly shows that WACM13 is preferred to WACM4 when a broader range of evidence is taken into account.

The IA is selective in the way it measures each of the options against relevant considerations, and it is based on crude and incomplete analysis. Most notably, it does not include an analysis of how the decision relates to all of Ofgem's duties. The IA overly simplifies a complex situation by using a crude assessment of whether options meet specific criteria (typically a simply "yes" or "no") rather than recognising that the options lie on a graduated spectrum consistent with Ofgem's decision criteria.

**Key to table below:**

	Much better
	Better
	Neutral
	Worse
	Much worse

**Table – Assessment of WACM 4 and WACM 13 against CUSC objectives<sup>14</sup> and broader Ofgem duties**

Option	CUSC Objectives			Additional Ofgem Duties		
	Results in <u>cost reflective</u> charges	Facilitates <u>effective competition</u> in generation and supply	Promotion of <u>efficiency</u> in implementation & administration	<u>Protect</u> existing and future customers	<u>Security of supply</u> in the short term <sup>15</sup>	Licence holders can finance their activities
<b>WACM 4</b>	Potentially better	Neutral	Neutral	Potentially worse	Potentially much worse	Potentially worse
x = avoided GSP investment; Applies to all; No grandfathering; 3 year phasing	<p>In Ofgem's view, this option limits the level of benefits paid to all generators to a cost reflective level. However, Ofgem's view of 'cost reflective' does not take account of avoided transmission and distribution costs and therefore potentially understates the true level of cost reflective charges.</p> <p>Ofgem has failed to carry out a crucial, comprehensive analysis to demonstrate how £1.62/kw represents a more cost reflective charge. <b>Ofgem ignores additional transmission system reinforcement costs</b> that may be necessary if more transmission connected generation came online as a result of removing triad revenues. Therefore it is not yet possible to conclude whether WACM 4 represents a more cost reflective outcome than the status quo except to say that spiralling triad revenues are potentially not cost reflective and therefore should be curtailed at some level pending a holistic review</p>	<p>Limiting benefits to a cost-reflective level in theory promotes a level playing field (which will lead to the most efficient generators succeeding, and those who are less efficient doing less well). As noted under 'cost reflective charges' Ofgem has potentially understated the true level of cost reflective charges.</p> <p>Also, CM14/15 generators relied on the current arrangements to lock in lower CM prices. This would preclude them from being able to compete on a level playing field with other generators in other markets - e.g. STOR. This impact is not considered in the IA except that Ofgem notes that some generators that will provide competition to existing generators may be forced out of business as they become unprofitable. Therefore Ofgem</p>	<p>Ofgem considers that where there is different treatment of new and existing users (and therefore different regimes applied to existing and new embedded generators) this is likely to lead to some additional administrative burden.</p> <p>This option is not likely to lead to additional (or less) administrative burden compared with the status quo. However, there is likely to be some implementation cost associated with the transition period and new arrangements. It is not clear from the IA whether Ofgem expects these costs to be material.</p>	<p>Ofgem's duty to protect customers encompasses both current and future customers.</p> <p>The removal of triad revenue from investors who had clearly relied on it (evidenced by Ofgem's analysis that highlights future CM prices will increase) is a material intervention in the market. It is therefore irrational to assume there will be no costs and risks resulting from lower investor confidence. A higher cost of capital is likely to be passed on as a cost to consumers in future. Ofgem's IA has largely ignored this impact.</p> <p>Analysis by Aurora indicates <b>customers are worse off under this option, with a higher cost of capital</b></p>	<p>This option will create significant uncertainty in generator behaviour.</p> <p>Ofgem assumes (for the purposes of quantifying consumer benefits) that all capacity will be delivered. This <b>inconsistent with statements that Ofgem expects that some of the CM 14/15 projects will not be profitable without triad revenue.</b> It is also unrealistic - not only will some of the contracted capacity not be built, but some current capacity could leave the market temporarily (due to the disruption caused by insolvency and asset resale complications) or permanently (as some assets move to overseas markets).</p>	<p>CM14/15 generators are locked into binding contracts for 15 years, with significant penalty termination fees. These contracts were entered on the assumption that triad revenues would continue.</p> <p>Removal of triad revenues will preclude CM14/15 generators from receiving a reasonable return on investment. This goes well beyond the normal risk inherent in the markets and is likely to impact on financeability for some generators.</p> <p><b>Financeability impacts are largely ignored in Ofgem's IA;</b> CM14/15 generators are not explicitly considered in distributional analysis.</p>

<sup>14</sup> The Impact Assessment does not assess CUSC objective (c) and (d). These are excluded from the table.

<sup>15</sup> Security of supply in the longer term is considered under 'facilitates effective competition in generation and supply'.



Option	CUSC Objectives			Additional Ofgem Duties		
	Results in <u>cost reflective</u> charges	Facilitates <u>effective competition</u> in generation and supply	Promotion of <u>efficiency</u> in implementation & administration	<u>Protect</u> existing and future customers	<u>Security of supply</u> in the short term <sup>15</sup>	Licence holders can finance their activities
		overestimates the positive impact on competition linked to this WACM.		negating consumer benefits from removing triad revenues.		
<b>WACM 13</b>	<b>Potentially better</b>	<b>Potentially better</b>	<b>Neutral</b>	<b>Better</b>	<b>Neutral</b>	<b>Potentially neutral</b>
x= avoided GSP investment; applies to all except 14&15 CM/CFD contract holders; Grandfathering applies to 14&15 CM/CFD contract holders, who receive £45.33/kW + RPI until 2033; No phasing.	<p>As for WACM4, this option limits the level of benefits paid to all generators to Ofgem's view of the cost reflective level. However, this level does not take account of avoided transmission and distribution costs and therefore potentially understates the true level of cost reflective charges.</p> <p>Therefore, as for WACM4, it is unclear whether this represents an improvement to the status quo except that spiralling triad revenues are most likely to be not cost reflective and so some curtailment, subject to further review is potentially better.</p> <p>There is also a question for both WACM4 and 13 about whether cost reflectivity is a relevant consideration for changes to the demand residual element of the charges. The demand residual is aimed at being a 'top up' charge. To the extent that this top up impacts on competition, then this should be considered in the competition objective, not the cost reflectivity objective. Cost reflectivity should be considered in the locational element of charging. Therefore cost reflectivity is not technically a consideration for this element of TNUoS charging and the CUSC process to assess these WACMs.</p>	<p>As for WACM 4, limiting benefits to a cost-reflective level promotes a level playing field (which will lead to the most efficient generators succeeding, and those who are less efficient doing less well).</p> <p>While the IA assumes (without sufficient evidence) that grandfathering will create distortions in the market, however <b>the underlying economic analysis is based on the view that grandfathering does not have a material impact on plant mix – i.e. there is no distortion.</b> Aurora analysis backs up this point and highlights that there is no impact on future plant mix</p>	<p>Ofgem considers that where there is different treatment of new and existing users (e.g. grandfathering), and therefore different regimes applied to existing and new embedded generators, this is likely to lead to some additional administrative burden.</p> <p>However, this is a qualitative statement and the materiality of this impact (if it exists) is not assessed. Ofgem acknowledge in their IA that the additional administrative burden associated with grandfathering is a relatively small burden and it is other factors that have driven their conclusions on grandfathering options.</p>	<p>While this option also changes the circumstances of generators, applying grandfathering to CM14/15 investors who clearly relied on it mitigates the adverse impact on investor confidence.</p> <p>Work by Aurora indicates that customers are better off under this option compared with WACM4 (where a higher cost of capital negates the consumer benefits from removing triad revenues).</p>	<p>Grandfathering for CM14/15 is likely to mean these generators continue to chase triads.</p> <p>Reducing the payment to other generators (to the value of avoided GSP investment) might introduce uncertainty in behaviour of these generators. If so, the lack of phasing means there is no time for these generators to adapt their despatch and business models (which would otherwise help minimise short term security of supply pressures).</p>	<p>This option preserves the ability for CM14/15 generators to receive a reasonable return on investment. Compared with options that do not include grandfathering, this is fairer on those who have relied on triad revenues to deliver benefits to consumers (in the form of lower CM prices).</p> <p>The Aurora analysis has demonstrated that grandfathering for CM14&amp;15 has no distortionary effect for new investment and therefore will not impact on financeability for future investors.</p>



### **iii) No attempt to quantify the full consumer implications**

Ofgem's analysis is clear that it does not attempt to quantify the cost to consumers of necessary reinforcement of the transmission system if more transmission connected generation comes online as a result of the removal of triad revenues. Furthermore, distribution network costs are completely ignored.

LCP/Frontier have assumed that the siting of plant on the distribution network does not alleviate or reduce the costs of constructing, operating and maintaining GB electricity networks.

However, other analyses have estimated that there is indeed a value to consumers from locating generation on the distribution system rather than the transmission system. Although Ofgem is sceptical about these other analyses, it does not seek to calculate an alternative perspective. This is unsatisfactory, as the reduction or removal of the need for transmission system reinforcement is one of the key consumer benefits driven by distributed generation. Without attempting to put a figure on the consumer savings brought about through embedded generation's avoidance of transmission reinforcement costs, the Ofgem analysis is clearly at risk of overestimating the consumer savings suggested by removing triad revenues.

The Frontier/LCP assumption draws on National Grid's assessment that "the cost of grid supply point infrastructure investment (GSP investment) is the only evidenced cost that embedded generation can help to avoid," and that Ofgem has seen "little evidence that a payment above this would be reflective of system savings." Whilst we disagree with this qualitative assessment we highlight that Ofgem's analysis and LCP/Frontier's approach has underestimated the impact on network costs by £1.62/kW year by not taking into account the benefit that EG has in avoiding GSP investment.

This issue could be addressed prospectively as part of an holistic SCR. A decision to allow grandfathering rights is appropriate and in consumers' interests and is necessary to ensure continued investment. But this decision should be followed by a full review of the residual value for new investment and any further required changes should be implemented prospectively (i.e. grandfathering should remain in place). To ensure that investment continues – to avoid the consequences of non-delivery and reduced investor confidence identified above – it is imperative that Ofgem commits to an enduring grandfathering arrangement which is not subject to further change in an ongoing review.

#### iv) **Process of the consultation:**

Given the magnitude of this decision, we feel that the initial six- week consultation period was inadequate. Ofgem's own guidance for consultation published in December 2011<sup>16</sup> states that the consultation periods are:

- “twelve weeks for consultations on issues that are expected to be of wide significance and interest. This is the maximum consultation period that we would normally expect to allow
- eight weeks for consultations on issues that are less likely to have a very wide impact or be the subject of substantial interest. This will be the usual timescale for consultations on a subject matter where no earlier, related formal consultation or other reasonable stakeholder engagement has occurred”

Therefore, a consultation on such a high impact decision as this should have been for a minimum of 8 weeks but given the interest and material impact signalled by the industry, a 12 week period would surely have been more appropriate.

- Ofgem's initial decision not to release the Frontier/LCP was disappointing and lacking the transparency that good regulation requires. It was also disappointing to note that, following a significant number of requests for this analysis to be released, only an extra week was added to the consultation period, more than half of which was over the Easter bank holiday weekend.
- The simultaneous launching of the Targeted Charging Review consultation has caused difficulties in smaller companies' ability to respond. Ofgem needs to do more to grasp the pressures on smaller companies in responding to these consultations and do more to stagger the timelines of such decisions.

#### v) **Legal Considerations**

***Ofgem Question 11: Do you believe you have a legitimate expectation or contractual right for the continuation of TDR payments? If so, please provide evidence.***

On a practical level, it would be grossly inefficient to expect each stakeholder to obtain legal advice in order to answer this essentially legal question when Ofgem has both the duty and the means to consider this question itself.

In these circumstances, we must reserve our position entirely with regard to the legality of what is proposed and the legal remedies open to us. It is inappropriate for Ofgem to require stakeholders to articulate their respective legal positions or to provide evidence in support. We are, though, of the view that we were right to hold several legitimate expectations in relation to triad payments to our CM 14/15 projects. Further, we consider that applying the cut in triad payments to these projects by declining to grandfather them constitutes unlawful interference with our right to enjoyment of our possessions, a guaranteed right further to the European Convention on Human Rights.

<sup>16</sup> <https://www.ofgem.gov.uk/ofgem-publications/37043/guidance-ofgems-approach-consultation.pdf>

### **FOI request in relation to the functioning of the CM**

We have already mentioned above that we have received information from BEIS in relation to past Government views on embedded benefits. We have explained above how the DECC information demonstrates that in 2014 the then Department of Energy and Climate Change was well aware that triad revenue is a revenue would be factored into their bids into the capacity market and also that it was entirely reasonable for the market to take from and read into such an obvious DECC mind-set that the risks of relying on EBs was low. Therefore, it was entirely legitimate for a prudent investor to include such revenue in its bid strategy.

However, we are still awaiting further FOI data from BEIS in relation to the interaction of embedded benefits and the CM and this forthcoming information may have relevance to these arguments.

## **5. Conclusion and Recommendation**

### **Conclusion**

- 1) In summary, implementation of the minded-to decision, to cut triad payments by 95% without grandfathering investment already made, is unnecessary and harmful to the consumer.
- 2) It would also be grossly unfair to CM 14/15 contract parties, causing very significant losses, which would be manifestly disproportionate to the aims of the decision.
- 3) In implementing the minded-to decision, Ofgem would be failing to meet its and CUSC's key objectives. Excluding grandfathering:
  - a) Does not bring any material benefit to consumer but gives rise to a significant potential for higher consumer costs.
  - b) Increases capital costs due to the increased risk to investors it represents, negating any saving of cost to consumers and potentially leading to additional increase in consumer costs.
  - c) Risks security of supply through non-delivery of CM capacity and increases the cost of procuring additional capacity, so costing consumers more over time, not less.
  - d) Is anti-competitive; it puts 14/15 CM contract parties at a disadvantage compared with new entrants. It introduces a new distortion.
  - e) Does not represent greater efficiency.
  - f) Risks requiring future T-1 CM auctions to procure more capacity from older, less efficient and higher-polluting generation assets owing to CM14/15 projects failing to deliver.
  - g) Is potentially unlawful in the circumstances.

### **Recommendation**

**WACM 13 secures the benefits of triad reduction for the current and future consumer whilst securing fairness through non-distortive grandfathering for CM 14/15 capacity and removes the risks of damage to investor confidence and security of supply from removing triad. This aligns with Ofgem's statutory duties more effectively than all other WACM options.**