



# Little Crow

*Solar Park*

*Little Crow Solar Park, Scunthorpe*

## APPLICANT'S RESPONSE TO EXAMINING AUTHORITY QUESTIONS EXQ3

### DEADLINE 6

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**APPLICANT'S RESPONSE TO THE EXAMINING AUTHORITY'S WRITTEN  
QUESTIONS AND REQUESTS FOR INFORMATION (EXQ3)**

**ON BEHALF OF INRG SOLAR (LITTLE CROW) LTD**

**DEADLINE 6**

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**1. APPLICANT'S RESPONSE TO EXAMINING AUTHORITY'S QUESTIONS  
(ExQ3)**

**Purpose of this Document**

- 1.1 This document is submitted by INRG Solar (Little Crow) Ltd ("the Applicant") and contains the Applicant's response to the second round of Examining Authority's written questions and requests for information (ExQ3) issued on 16 August 2021.
- 1.2 The Applicant's response is presented in a tabulated format.

**APPLICANT'S RESPONSE**

ExQ3	Question to:	Question:	Applicant response
<b>1. General and Cross-topic Questions, including general matters relating to the Environmental Statement</b>			
3.1.1	Northern Powergrid Limited	<p>Please advise whether grid connections have been sought and/or agreed for the operation of the following proposed solar farms:</p> <p>a) Sweeting Thorns, Holme, Scunthorpe, subject to North Lincolnshire Council planning application reference PA/2015/0114 and granted planning permission on appeal on 5 December 2016 [REP1-021].</p> <p>b) 40 Megawatts at Conesby House Farm, Normandy Road, Scunthorpe DN15 8QZ, subject to North Lincolnshire Council planning application reference PA/2018/2140 and granted planning permission on 22 February 2019 [REP1-014].</p> <p>(This question was previously asked by the ExA as second written question 2.1.11 in PD-010)</p>	N/A
3.1.2	The Applicant	Further to the submission of the projected hourly electricity output in a calendar year for the candidate design for the Proposed Development [REP4-019], please show on a graph or graphs the average hourly predictions for megawatt hour exportation to the grid for the months of May and December.	The Applicant encloses at Appendix 1 the graph requested for REP4-019, as well as graphs for REP4-020, REP4-021, REP4-022.
3.1.3	The Applicant	<p>As part of the consideration of agenda item 4 (National and Development Plan policy) during Issue Specific Hearing 2 (ISH2 held on 29 June 2021), in the context of the needcase that has been made by the Applicant there was some discussion concerning the 'background' documents that have been relied on as providing the context for the decarbonisation and expansion of electricity generation within the United Kingdom. That discussion focusing on how up to date some of the assumptions and statistical data set out in the background documents are, given their age, and solar energy generation not being within the scope/coverage of National Policy Statements EN-1 and EN-3.</p> <p>Further to the discussion held during ISH2 the Applicant is requested to undertake a review of the background documents and to submit an updating note that draws upon the most up to date statistical data and emerging policy relating to the decarbonisation and expansion of electricity generation in the United Kingdom.</p> <p>In responding to this question the Applicant should:</p> <p>a) Submit as an Examination document the Government's Energy White Paper 'Powering our Net Zero Future' of December 2020 and comment on what implications, if any, it considers the White Paper's publication has for solar electricity generation in the United Kingdom.</p> <p>b) Submit as Examination documents any other documents that it considers constitute the Government's most up to date emerging policy for the decarbonisation and expansion of electricity generation in the United Kingdom.</p>	<p>In response to this question the applicant has submitted Applicant's Response to ExQ3 Question 3.1.3 (Document Reference 9.44 LC OTH) at Deadline 6. The Policy Note is supported by technical appendices which present as 'Examination documents' all the policy documents referred to in the note.</p> <p>A - As requested, Government's Energy White Paper 'Powering our Net Zero Future' of December 2020 is submitted at Deadline 6 at Appendix A of the Applicant's Response to ExQ3 Question 3.1.3 Technical Appendices (Document Reference 9.45 LC OTH).</p> <p>B - As stated above, the Policy Note is supported by technical appendices which present as 'Examination documents' all the policy documents referred to in the note.</p>

ExQ3	Question to:	Question:	Applicant response
		Kingdom.	
3.1.4	The Applicant	<p>With respect to the outline Construction and Environmental Management Plan(oCEMP)[REP4-007]:</p> <p>a) Is paragraph 6.9 (waste management) complete as the inclusion of 'following' in thesecond bullet point suggests some further items were intended for inclusion in this paragraph?</p> <p>b) In paragraph 6.10 is the sentence referring to the Mayor of London's guidancerelevant, given the location for the Proposed Development?</p> <p>Is there a need for some consolidation of the matters covered within section 6 (Dustand Emission Mitigation) of the oCEMP to address duplication and/or inconsistency?</p> <p>Matters concerning communications (paragraphs 6.4 and 6.10), monitoring (paragraphs 6.6 and 6.11), preparing and maintaining the site (paragraphs 6.7 and 6.12) and operations (paragraphs 6.8 and 6.13) have each been listed twice within section 6 of the oCEMP.</p>	<p>A – the sentence appeared to be incomplete however this bullet point at paragraph 6.9 was a duplicated sentence as at paragraph 6.3, from when previous revisions were made to the oCEMP. This bullet point has now been removed.</p> <p>B – The reference to Mayor of London's guidance has been removed from the updated document presented at Deadline 6 (Document Reference 7.8D LC TA4.1 Revision D).</p> <p>The Applicant agrees that the oCEMP (Document Reference REP4-007) would benefit from consolidation in accordance with the points made by the ExA.</p> <p>An updated Outline Construction Environmental Management Plan (Document Reference 7.8D LC TA4.1 Revision D) has been submitted at Deadline 6 to address the comments raised.</p> <p>Paragraphs 6.4 and 6.10 have now been consolidated into Paragraph 6.4 of Document Reference 7.8D LC TA4.1 Revision D.</p> <p>Paragraphs 6.6 and 6.11 have now been consolidated into Paragraph 6.6 of Document Reference 7.8D LC TA4.1 Revision D.</p> <p>Paragraphs 6.7 and 6.12 have now been consolidated into Paragraph 6.7 of Document Reference 7.8D LC TA4.1 Revision D.</p> <p>Paragraphs 6.8 and 6.13 have now been consolidated into Paragraph 6.8 of Document Reference 7.8D LC TA4.1 Revision D.</p>
3.1.5	The Applicant	<p>With respect to the outline Decommissioning Strategy (oDS) [REP3-009], for section 2(Decommissioning Principles) under the sub-heading 'e) schedule':</p> <p>a) What are decommissioning and restoration Zones 3, 5, 6 and 7? Are those zones equivalent to Work Numbers 3, 5, 6 and 7 or something different as there is no planwithin the oDS that identifies the previously mentioned zones?</p> <p>b) Should the text be expanded to identify the anticipated timescales and number of vehicle movements for the decommissioning of all elements of the decommissioningand restoration activities for the Proposed Development and therefore, amongst other things, refer to the solar array (Work Number 1) and the substation (Work Number 4) under the circumstance of it being decommissioned?</p>	<p>A – That is correct, 'zones' are equivalent to the Work Numbers. There was an error in the terminology used in the oDS. This has been rectified by updating the oDS. An updated oDS has been resubmitted at Deadline 6 (Document Reference 7.9C LC TA4.2 Revision C).</p> <p>B - The text has been expanded in updated oDS submitted at Deadline 6 (Document Reference 7.9C LC TA4.2 Revision C). For clarity, the solar arrays were already included and by admission this may have been unclear. This has been rectified by including a Gantt Chart at paragraph 2.6 of the updated oDS, which includes the decommissioning of all elements of the development. With regards to the substation, two eventualities have been covered; it to be decommissioned and removed or retained. This was discussed in ISH1 and outlined in the Applicant's ISH1 Post Hearing Submission under Agenda Point 3(i) in Document Reference 9.17 LC OTH, PINS REFERENCE REP1-008. Amendments have been made to oDS to identify the timescale of the decommissioning and associated vehicle movements, these are provided within Sections e and f of paragraph 2 of the updated document.</p> <p>The applicant has also taken the opportunity to make minor amendments / improvements to the oDS. The number of workers at the decommissioning phase has increased from 30no.- 100no. to be more accurate and align with the number of workers during the construction phase. This is consistent with the figures provided in the Transport and Access Chapter of the ES (Document Reference 6.9 LC ES CH8, PINS Reference APP-066).</p>

ExQ3	Question to:	Question:	Applicant response
			An updated oDS (Document Reference 7.9C LC TA4.2 Revision C) has been submitted at Deadline 6.
3.1.6	The Applicant	<p>With respect to the predicted calculation of carbon savings for the first year of operation stated in the Air Quality and Carbon Assessment [REP4-009], please clarify:</p> <p>a) Whether the figure of '31,364,324kg CO<sub>2</sub> (31,364 tonnes per year)' in paragraph 6.3 is accurate when 0.233kg is multiplied by 134,530,000kWh.</p> <p>How the offset figure of '... at least 34,5784 tonnes of CO<sub>2</sub> in the first year' referred to in paragraph 7.11 has been derived, as that figure (disregarding what appears to be a typographic error relating to the quoted figure having six digits) does not appear to accord with the figure quoted in paragraph 6.3.</p>	<p>The value stated in paragraph 6.3 is correct. However, due to the value of 0.233kg having been rounded to 3 decimal places, when 134,530,000kWh is multiplied by 0.233kg the CO<sub>2</sub> offset value calculated is slightly lower at 31,345,490kg CO<sub>2</sub>. The actual figure in the Defra Environmental Reporting Guidelines is 0.23314kg and when multiplied by 134,530,000kWh it gives a total CO<sub>2</sub> offset of 31,364,324kg CO<sub>2</sub> (31,364 tonnes per year).</p> <p>The offset figure stated in paragraph 7.11 was incorrect and had not been updated. The correct value is 30,350 tonnes of CO<sub>2</sub> offset in the first year. This was calculated based on the total CO<sub>2</sub> savings over a year (31,364 tonnes) less the worst-case total tonnes of CO<sub>2</sub> generated from construction vehicles (1,014 tonnes).</p> <p>The offset figure in paragraph 6.3 (31,364 tonnes per year) is the total CO<sub>2</sub> offset from the production of renewable electricity whereas the CO<sub>2</sub> figure in paragraph 7.11 is the total CO<sub>2</sub> offset from the production of renewable electricity less the worst-case total CO<sub>2</sub> generated from construction vehicles.</p> <p>The Air Quality and Carbon Assessment has been updated to reflect the above comments. (Document Reference 7.12C LC TA4.5).</p>
3.1.7	The Applicant	<p>With respect to the predictions for carbon dioxide produced during the construction phase for the Proposed Development, please explain why the totals quoted in the 'totals' columns in Tables 6.2, 6.3 and 6.4 of the versions of the Air Quality and Carbon Assessment submitted at Examination deadlines 2 [REP2-012] and 4 [REP4-009] differ from one another, given that the quoted inputs in columns 2, 3 and 4 in both sets of Tables 6.2, 6.3 and 6.4 are the same.</p>	<p>This is associated to an error in the reported kg CO<sub>2</sub> per km column of Tables 6.2, 6.3 and 6.4 used in the Air Quality and Carbon Assessment (Document Reference 7.12A LC TA4.5, PINS Reference REP2-012) which utilised the 2018 derived factors which have since been updated. The recalculated total kg CO<sub>2</sub> was reported in the updated Air Quality and Carbon Assessment (Document Reference 7.12B LC TA4.5, PINS REFERENCE REP4-009) report, however, the input data had not been updated accordingly. The kg CO<sub>2</sub> per km value should have been updated to report the most recent factors derived from the July 2020 UK Government Greenhouse Gas conversion factors<sup>1</sup>. This has been rectified in the latest submission. There was also a typo in the number of Rigid HGVs which should have read 322 and not 332 however 322 was used in the calculations.</p> <p>The Air Quality and Carbon Assessment has been updated to reflect the above comments (Document Reference 7.12C LC TA4.5).</p>
3.1.8	The Applicant	<p>How should the predicted annual 'carbon savings' quoted in section 6 of Air Quality and Carbon Assessment [REP4-009] be looked upon, ie optimistic, what could reasonably be expected or pessimistic, given that the level of carbon savings achieved would be dependent on how much electricity was generated by the Proposed Development, which would be affected by weather conditions and the resulting amount of sunlight received by the Proposed Development?</p>	<p>The carbon savings are based on the forecast output (134,530,000kWh per annum) from the solar farm and the candidate design using 420Wp modules with the grid export limited to 99.9MW – see Appendix 2 of the Technical Guide (Document Reference 9.20A LC OTH, PINS Reference REP4-014). The industry norm would be to expect a fluctuation of +/- 3% in the forecast output of a solar farm in any calendar year which would ultimately be expected to even out over the lifespan of a solar farm.</p>

<sup>1</sup> <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>

ExQ3	Question to:	Question:	Applicant response
3.1.9	The Applicant	<p>With respect to predicted CO<sub>2</sub> displacement for the candidate design for the Proposed Development, which, for example, has been stated as being between 64,500 and 86,000tonnes per annum in paragraph 4.15.1 of Chapter 4 of the Environmental Statement [REP5-006], please comment on:</p> <p>a) What allowances have or have not been made for the variability in generation that might arise as a consequence of the effect of weather conditions on the levels of sunlight received by the Proposed Development?</p> <p>b) How the above mentioned CO<sub>2</sub> displacement figures relate to the around 50,000 tonnes following one year of generation quoted in paragraph 6.1 of the Applicant's planning statement [REP5-017] and the 31,364 tonnes per year quoted in paragraph 6.3 of the Air Quality and Carbon Assessment [REP4-009]?</p>	<p>The Planning Statement (Document Reference 9.1A LC OTH, PINS Reference REP5-017) and paragraph 4.15.1 of Chapter 4 of the Environmental Statement (Document Reference 6.4A LC ES CH4, PINS Reference REP5-006) made reference to the 'good practice' figures provided by the Solar Trade Association<sup>2</sup>. In 2021, and following the acceptance of the Little Crow Solar park application by the Planning Inspectorate, the Solar Trade Association changed its name to Solar Energy UK<sup>3</sup> and the good practice figures are currently not available on the new <a href="http://www.solarenergyuk.org">www.solarenergyuk.org</a> website.</p> <p>For the purpose of determining the application, the figures set out in the Air Quality Assessment should take precedence over the good practice figures provided by the former Solar Trade Association.</p>
3.1.10	North Lincolnshire Council	Does the Council have any observations to make on the Applicant's cumulative effects assessment for the proposed Keadby 3 Low Carbon Gas Power Station Project and the proposed Able Marine Energy Park Material Change 2 stated in REP5-021?	N/A
3.1.11	North Lincolnshire Council	Further to the Deadline 4 submission of copies of the Planning for Renewable Energy Supplementary Planning Document of November 2011 [REP4-024] and Planning for Solar Photovoltaic (PV) Development Supplementary Planning Document of January 2016 [REP4-025], please confirm the status of these documents, ie whether one or other or both remain extant.	North Lincolnshire Council's planning team have confirmed that both Supplementary Planning Documents (SPDs) listed in Question 3.1.11 remain extant. However, the content referring to National Policy is now out of date, particularly the references to the National Planning Policy Framework and as such should be afforded with limited weight.
3.1.12	The Applicant, North Lincolnshire Council and all other Interested Parties	Further to the Government's publication of the updated National Planning Policy Framework (the Framework) and the making of revisions to the Planning Practice Guidance (PPG) on 20 July 2021, please advise whether you consider any of the revisions to the Framework and/or the PPG that have been made are important and relevant to the determination of the submitted application. In responding to this question there is no need to highlight instances where there has simply been a change in paragraphing numbering in either the Framework or the PPG.	<p>The Applicant welcomes the latest revision of the National Planning Policy Framework (NPPF) published on 20 July 2021. The key changes to the NPPF relate to updated policies aiming to improve the design of new development, and these are relevant and important to the determination of the application proposal. At paragraph 131, there is now an emphasis on using trees in new developments. The new paragraph also recognises how trees can also help mitigate and adapt to climate change. The Detailed Landscape Proposal (Document Reference 7.21B LC TA6.5, PINS Ref REP5-014) identifies how the proposed planting schedule includes the planting of 19,533 species (comprising Dogwood, Hawthorn, Hazel, Holy, Blackthorn, Spindle and Purging Buckthorne). The application proposal duly satisfies the requirements of paragraph 131.</p> <p>No revisions have been undertaken to the PPG as part of the 20 July 2021 updates which are considered to be most relevant to this application.</p>
<b>2. Agriculture and Soils</b>			
The ExA has no questions relating to this issue at this time.			
<b>3. Air Quality</b>			
The ExA has no questions relating to this issue at this time.			

<sup>2</sup> The good practice figures promoted by the Solar Trade Association was ""for every 5MW installed, a solar farm will power over 1,500 homes annually (based on an average annual consumption of 3,3000 kWh of electricity for a house) and save 2,150 tonnes of CO<sub>2</sub>""

<sup>3</sup> <https://solarenergyuk.org/about-us/?cn-reloaded=1>



ExQ3	Question to:	Question:	Applicant response
<b>4. Amenity and Recreation</b>			
The ExA has no questions relating to this issue at this time			
<b>5. Biodiversity, Ecology and the Natural Environment</b>			
3.5.1	Natural England	<p>The Applicant in its response to ExA's first written question 1.5.9 [page 17 in REP2-022] has submitted that the site for the Proposed Development '... is highly unlikely to represent important functionally-linked land ...' for the Humber Estuary Special Protection Area (SPA), including effects for Lapwing which are identified in the citation for the SPA as being an 'Assemblage qualification' species. With Lapwing having been found by the Applicant to be present within the Order Limits, please:</p> <p>a) Advise whether Natural England agrees or disagrees with the Applicant's view that the Proposed Development would be unlikely to have a significant effect on the interest features of the SPA either alone or in-combination with other plans and/or projects?</p> <p>b) Advise on how species identified as being subject to an assemblage qualification for the SPA should be considered for the purposes of undertaking a Habitat Regulations Assessment under the provisions of the Conservation of Habitats and Species Regulations 2017 (as amended).</p> <p>(This question was previously asked by the ExA as second written question 2.5.2 in PD-010)</p>	<p>The Applicant would refer to the response provided in ExQ2 Question 2.5.2 (Document Reference 9.33 LC OTH, PINS Reference REP4-018) submitted at Deadline 4.</p> <p>Furthermore, the table under Paragraph 4.1 of Natural England's Statement of Common Ground (Document Reference 9.10A LC OTH, PINS REFERENCE REP4-013) states that "Natural England are satisfied with the assessments of impacts and residual effects on ecological features" when responding to the matter of "likely effects on any protected species and on special interest features of sites designated for nature conservation purposes".</p>
<b>6. Draft Development Consent Order (DCO)</b>			
3.6.1	The Applicant	<p>With respect to the generating capacity for the Proposed Development the ExA notes the Applicant's response to second written question 2.6.5 [REP4-018], most particularly the Applicant's view '... that it is not possible to specify a maximum capacity ...' in any made DCO and that if a generating capacity was to be set the Applicant considers this should '... relate to the combined capacity of both the solar and battery ...' and be a '... combined capacity of 500MW as this would allow some flexibility for reasonably foreseeable technological advances'.</p> <p>If a maximum generating capacity was to be stated in any made DCO, could that reasonably be set at 500 megawatts (MW) as a combined capacity for the solar array and the battery electrical storage system (BESS), given that: 500 MW would significantly exceed the candidate designs of 150 to 200 MW peak for the solar array and 90 MW for the BESS used for the purposes of undertaking the environmental impact assessment for the Proposed Development (as reported in the submitted Environmental Statement); and the available grid connection limit of 99.9 MW?</p>	<p>As previously confirmed, the generating capacity of the solar array and the battery energy storage system (BESS) are not parameters upon which the development has been assessed in the environmental statement (ES), and therefore any restriction on maximum capacity imposed via the DCO would be purely arbitrary. The ES refers to a candidate design in order that the physical parameters of the development (i.e. the panels and the battery) could be assessed. That candidate design was based on an example capacity that could be accommodated within the size of panels and battery assessed at the time of the preparation of the ES and the DCO Application. As has been demonstrated by the Applicant during the Examination, at ISH and in the Technical Guide [ref], technology for solar development is advancing all the time and there is no reason why a greater capacity couldn't be accommodated within the physical parameters of the ES, thereby having no greater environmental impact than set out in the ES. The Applicant's response to ExQ2.6.5 (Document Reference 9.33 LC OTH, PINS Reference REP4-018), whilst noting the Applicant's firmly held view that no maximum should be imposed, proposed 500MW combined capacity, should the ExA be inclined to suggest that a maximum should be imposed, in order that such technological advances could be embraced within the parameters of the ES.</p> <p>The Applicant explained in ISH2 that 535Wp panels (a feasible and currently available option within the design parameters) would produce around 200MW generation and need at least a 90MW battery, possibly more to allow effective management of the project within the constraints of the available grid capacity.</p> <p>It is therefore evident that the combined capacity of the solar array and the BESS based on the currently available technology, will exceed 300MW.</p>

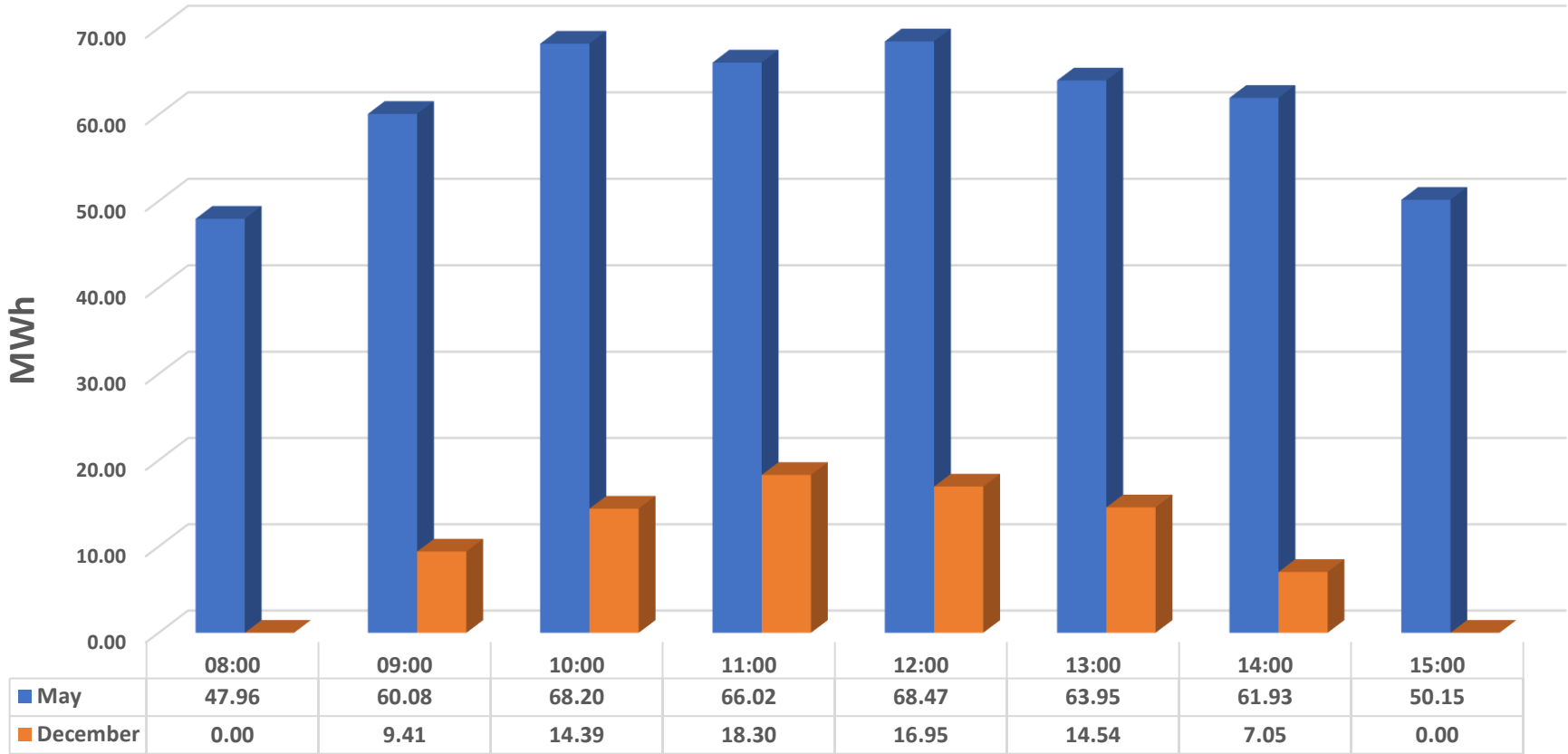


ExQ3	Question to:	Question:	Applicant response
			<p>The Applicant also explained at ISH2 that it is likely that c600Wp panels would be available by the earliest date at which the development is likely to commence, but the Applicant is also conscious that the proposed time limit for commencement of the authorised development referred to in requirement 2 at Schedule 2 Part 1 of the dCO (Document Reference 3.1F LC DCO Revision F submitted at Deadline 6) is five years from the date that the Order comes into force. Assuming that the Order would come into force in April 2022 (the estimated decision date) then the Applicant considers that it is appropriate to contemplate technological advances within that time frame. Experience of solar panel development to date strongly indicates that panels of a greater capacity but within the physical parameters of those currently available, are likely to come onto the market within that period.</p> <p>If technology advances allowed for greater capacity panels (within the ES parameters), then similarly a greater BESS would be required in order to allow the efficient operation of the project given the grid capacity. As for panel development, battery technology is advancing at pace meaning that more efficient batteries are likely to be available within the physical parameters of the BESS assessed in the ES to compliment any advances in panel development.</p> <p>The Applicant's suggestion of a 500MW capacity limit is itself entirely arbitrary but represents its estimation of a reasonable capacity based that is unlikely to be exceeded based on the above principles, notwithstanding the Applicant's clearly stated position that no limit should be imposed.</p> <p>With regard to the available grid connection, the current limit of 99.9MW is fixed at a point in time and it may be possible to increase this in the future, however, even if it remained at that limit for the lifetime of the development, the BESS would enable the project to be managed effectively within that limit. (as explained in [the Applicant's response to ExQ2.1.2 (Document Reference 9.33 LC OTH, Pins Reference REP4-018) and the Technical Guide (Document Reference 9.20A LC OTH REVISION A, PINS REFERENCE REP4-014).</p>
<b>7. Landscape and Visual Effects</b>			
The ExA has no questions relating to this issue at this time.			
<b>8. Noise</b>			
The ExA has no questions relating to this issue at this time.			
<b>9. Transportation and Traffic</b>			
The ExA has no questions relating to this issue at this time.			
<b>10. Water and Flooding</b>			
The ExA has no questions relating to this issue at this time.			

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**APPENDIX 1      HOURLY COMPARISON GRAPHS**

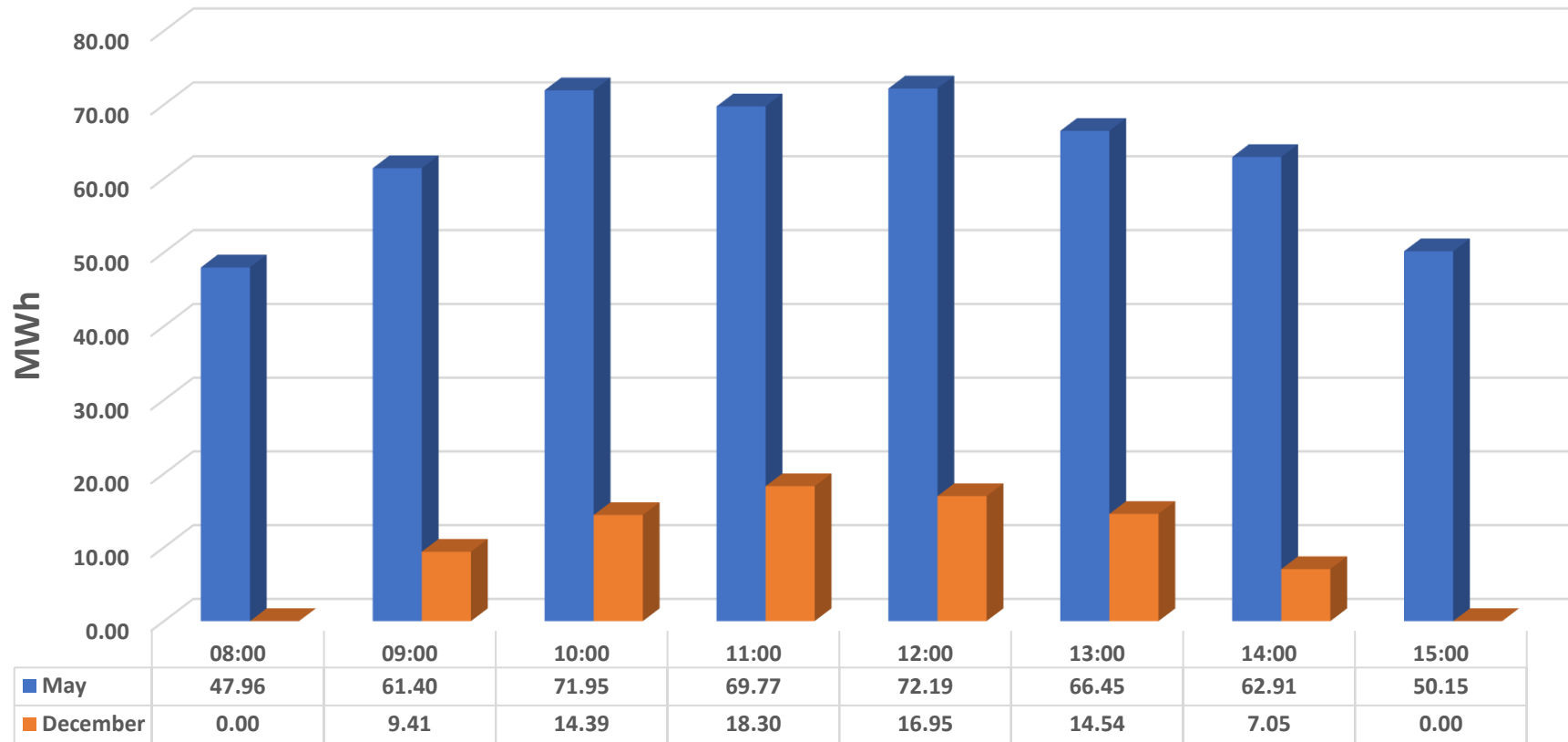
**Comparison of average hourly electricity production  
in May versus December 420Wp Modules with  
Grid Export Limited to 99.9MW**



**Time of Day**

■ May ■ December

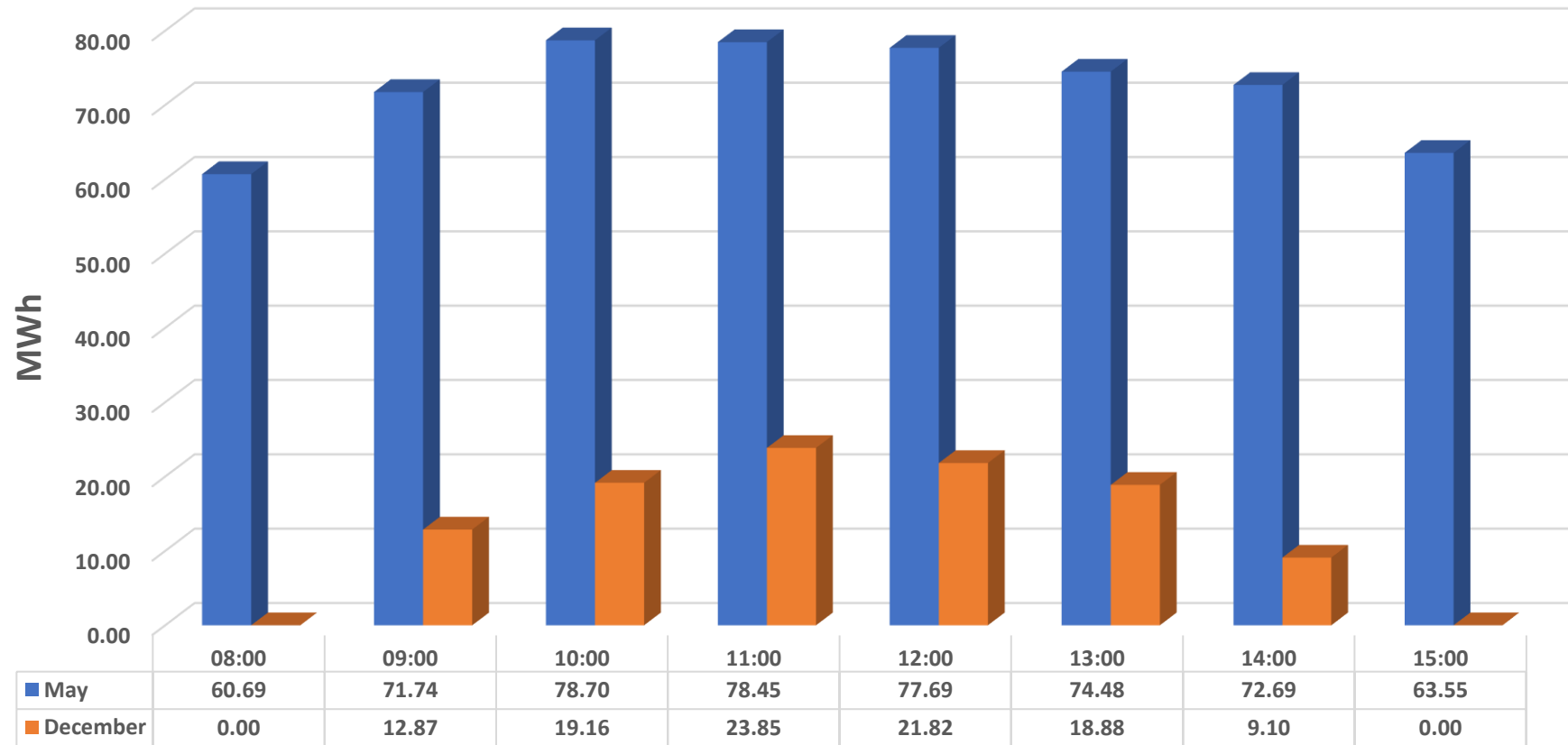
### Comparison of average hourly electricity production in May versus December using 420Wp Modules with Unlimited Grid Export



**Time of Day**

■ May   ■ December

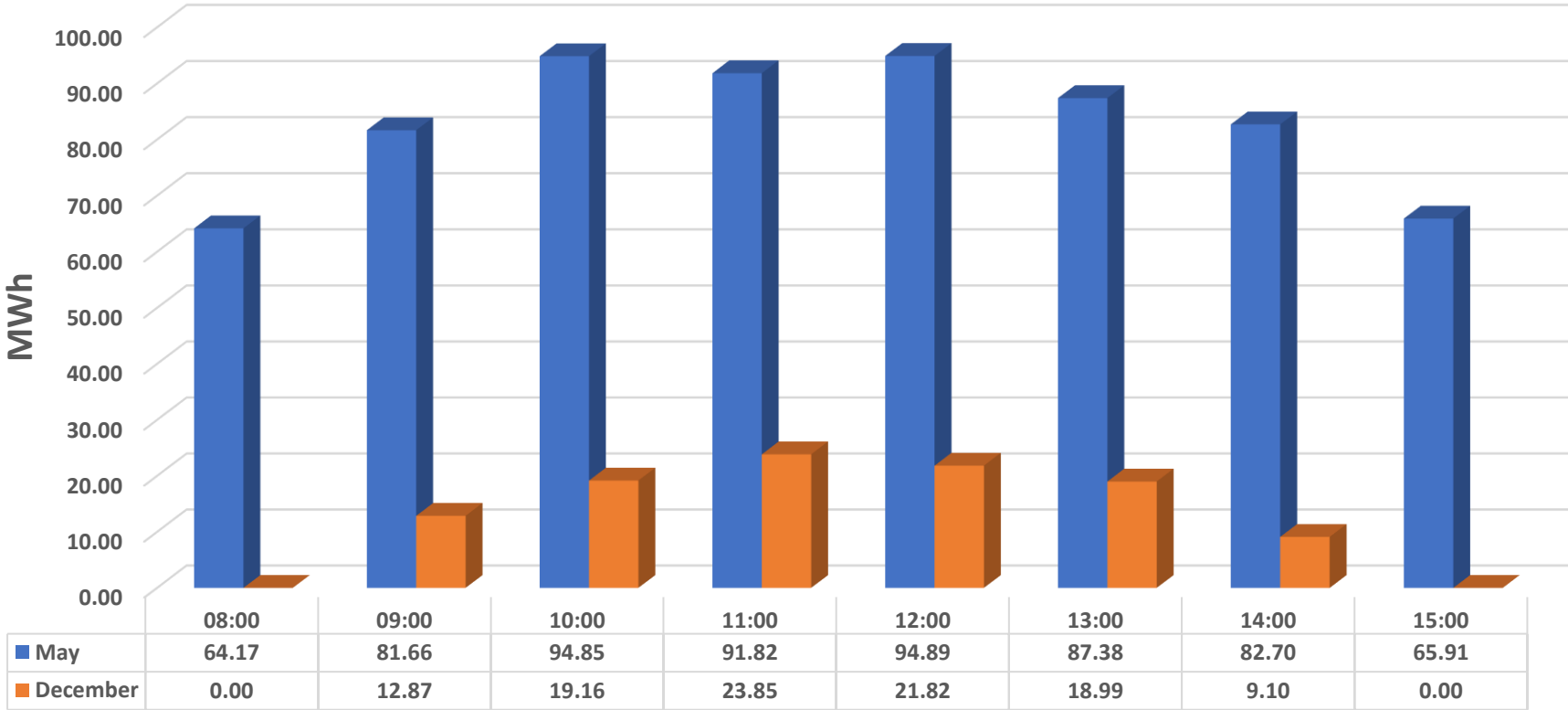
**Comparison of average hourly electricity production  
in May versus December using 535Wp modules with  
Grid Export Limited to 99.9MW**



**Time of Day**

■ May ■ December

**Comparison of average hourly electricity production  
in May versus December using 535Wp Modules  
with Unlimited Grid Export**



**Time of Day**

■ May ■ December

