From:	[redacted]
To:	Jones, Hefin
Cc:	[redacted]
Subject:	CHSP Submission made to Open Floor Hearing 3 - for Deadline 5
Date:	14 September 2019 17:17:05
Attachments:	[redacted]

Dear Hefin

Please find attached for Deadline 5, our submission made to Open Floor Hearing 3.

Kind regards

David

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CHSP

Submission on behalf of the Faversham Society to Open Floor Hearing 3 - for Deadline 5

The Need for CHSP in the context of Demand for Solar PV – Addendum

Short Summary

According to National Grid data on solar energy requirements CHSP is not needed. This need is already being met by the rapid growth of smaller-scale solar arrays, with **4.8GigaWatts** of solar projects planned for completion between 2019 and 2022 *excluding Cleve Hill.*
This far exceeds the National Grid's 2019 Future Energy Scenario which predicts that the maximum additional demand for solar required between 2019 and 2022 is **3.0 GigaWatts**.

1. Introduction

This paper updates our previous analysis submitted under the Need Submission for CHSP including more detailed information on National Grid 2019 Future Energy Scenarios ("NG FES") and updated information on Solar PV projects currently in planning.

Crucially, the National Grid's projections of need for solar PV through to 2022 have been revised down whilst the growth of small-scale solar PV projects in planning has accelerated, making it now impossible to justify any need for CHSP on the basis of national energy requirements.

2. Government policy

There are two key UK Government targets for delivering a pathway to zero carbon and maintaining global temperature increases at sustainable levels:

- A target to operate the electricity system at zero carbon by 2025; and
- The target from 80% reduction in greenhouse gases from 1990 levels by 2050 as set out in the Climate Change Act 2008, was updated in June 2019 to net zero emissions target

3. The National Grid Future Energy Scenarios

National Grid consider the above targets in developing their FES. They, of course, recognise the need for immediate action to address these important targets considering a whole system approach and using multiple technologies across heating, electricity and transport energy demands.

Crucially, two of the four pathways presented by NG FES achieve the 2050 decarbonisation target. These are:

- Community renewables; and
- Two degrees.

This is considering the whole system approach outlined by national grid who consider the overall requirement of the UK energy system to ensure the maintenance of security of supply including: imbalance and the lack of inertia which results from renewable energy; the cost of delivering this energy security; and the decarbonisation goals.

4. Updated analysis

Given the above, we have updated our detailed analysis presented previously for the 2019 FES electricity generating capacity projections presented by National Grid, using specifically their projections for solar PV capacity to be required in each year.

Table 1 Required Solar PV generating capacity FES 2019, 2018 – 2030

(GW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Community Renewables	12.7	13.1	13.7	14.5	15.7	17.1	18.7	20.4	22.2	24.0	25.8	27.7	29.7
Two Degrees	12.7	13.1	13.6	14.0	14.5	15.4	16.2	17.0	17.9	19.0	20.2	21.4	23.0

Source: NG FES 2019, Table 5.4

Table 2 Solar PV installed generation capacity FES 2019, 2031 - 2040

(GW)	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Community Renewables	32.1	34.3	37.1	39.5	41.7	43.7	45.3	46.6	47.7	48.5
Two Degrees	25.2	27.8	30.5	33.2	35.2	36.3	37.1	37.9	38.6	39.3

Source: NG FES 2019, Table 5.4

Table 3 Solar PV installed generation capacity FES 2019, 2041 - 2050

(GW)	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Community Renewables	49.1	49.5	49.9	50.3	50.7	51.0	51.4	51.7	51.9	52.2
Two Degrees	39.9	40.4	40.7	40.8	41.0	41.1	41.3	41.5	41.7	42.0

Source: NG FES 2019, Table 5.4

We have focussed on the two scenarios: Community Renewables and Two Degrees, since besides achieving the 2050 decarbonisation target, they constitute the maximum predicted energy demand with a sustainable, but substantial build-up of solar PV.

Again, comparing these projections to the capacity of solar PV currently in the planning system both including and excluding solar PV:

5. Updated Solar PV capacity in planning

The ever-improving economics of solar PV is leading to increased numbers of small-scale projects being submitted to the normal planning process. The table below shows an updated status, with now 5.1GW of PV in planning as opposed to 4.6GW a matter of months ago:

Total (MW)	2019	2020	2021	2022	Total
Total estimated capacity of Solar PV (including Cleve Hill)	978	2,411	677	1,091	5,157
Total estimated capacity of Solar PV (excluding Cleve Hill)	978	2,411	677	761	4,827

Source: Planning submissions

6. Conclusion

The table below shows the position as presented under the 2018 FES and the comparable position under the 2019 FES. We note that we have considered the period to 2022, as given the development and construction timeframes for solar PV we only have visibility to this point. However, given the accelerating growth in small scale solar PV and the FES2019 projected demand in the years beyond 2022 there is no reason to suggest that new solar PV projects will not at least keep up with this demand without the need for CHSP.

The updated position is still clear that under the National Grid scenarios Community Renewables and Two Degrees which meet the updated targets to reach net zero emissions by 2050, the additional capacity achieved from CHSP is not required.

Solar PV additional capacity (GW)	**2018 FES New capacity 2019 to 2022**	**2019 FES New capacity 2019 to 2022**	**2019 projections New capacity 2019 - 2023**
Community Renewables	4.14	**2.97**	4.04
Two Degrees	2.33	1.83	2.31
Estimated planned capacity (*including Cleve Hill*)	5.16	5.16	
Estimated planned capacity (*excluding Cleve Hill*)	4.83	**4.83**	

The argument is now even stronger that it is impossible to demonstrate any need for CHSP since the National Grid's FES2019 projection of the maximum total new solar PV required to be completed in the years 2019-2022 is now 2.97GW whilst the total solar PV currently in planning for 2019-2022 is now 4.83GW. ie an excess capacity of 1.86GW *without building CHSP*.

Indeed, the final column above shows that the solar PV currently in planning for 2019-22 (4.83GW excluding CHSP) actually exceeds the projected requirements through to 2023 (4.04GW)

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