REA Submission, the Sir Patrick Vallance Emerging Technologies Review



Follow up to REA Roundtable, 22 February 2023

1. Regulatory Resourcing / Skills / Capabilities:

 Regulatory Resourcing within the regulators (eg the Environment Agency, Planning departments) is a genuine issue but resource constraints are also contributing to inconsistent treatment by regulators that may affect market competition.

Sufficient funding for relevant regulatory organisations, such as the Environment Agency (EA) and devolved equivalents eg SEPA, is essential – to meet decision timelines, increase their staff and improve their evidence base and understanding of different technologies.

There needs to be a reform of the planning national policy framework but also adequate funding for local planning offices, to speed up decision-making on low carbon generation and ensure that regulations are consistently enforced.

Inconsistent enforcement and application of regulations are leading to a non-level playing field. A brief specific example from our members is that of a composting operator with two sites operating using the same technology and operating procedures.

One of these operator's sites has been given six improvement conditions costing approx. £10K and the other site in a different area with a different officer, has been given 29 improvement conditions, likely to cost in the region of £250K.

Similarly, Ofgem decision making is a long drawn out process, exacerbated by constraints, as is there administration of key historic renewable support schemes such as the FiT and RHI. Regional grid operators ion the electricity networks have a very uneven enforcement and application of rules, that again is partly down to lack of resource.

There are Case Studies illustrating this further in the Additional Information below.

2. Regulatory Improvements:

• Grid Access Timelines

There is an urgent need to relieve grid connection constraints for all, including small baseload developments. For example, a South West England geothermal development has been quoted a December 2036 energisation date, and a London energy storage project a 2037 connection date. This is the case around the country for projects of all sizes and scales.

This is not compatible with CfD timelines and the investability of projects.

Ofgem DNO Charging Framework - Locational Charging Regulation/ DC Metering Standards & Settlement Code

This is a regulatory change that could be made to help unlock further large scale solar development. Please refer to the more detailed accompanying presentation on this issue as well.

One large scale solar developer at the REA states that solving this issue could result in up to 25 more projects and £500m more investment, from their pipeline alone.

Benefits of DC metering

Having a single set of inverters pose a reduced risk to grid fault levels, resulting in lower capacity constraints for Grid Operators to manage and improving headroom before reinforcement is required. This lowers both up front and ongoing maintenance costs, by only requiring one set of inverters.

This allows solar and storage projects to be built for less overall, delivering savings to consumers and governments now and in the future.

How to enable this:

- The issue has been raised with OPSS and we are expecting guidance to coincide with the CfD guidance that they are to issue on the use of DC meters.
- If they do not allow the use of DC meters, then secondary legislation will need to be created/added to 'The Meters (Certification) Regulations 1998' to allow the adoption of DC meters for billing purposes
- The key point is that DC metering is expected to expand considerably with the use of DC charging

infrastructure for Electric Vehicles, so it would be advised that legislators consider implementing DC meter regulations as soon as possible, given secondary legislation being a lengthy process

This can be provided for via secondary legislation:

If they do not allow the use of DC meters, then secondary legislation will need to be created/added to 'The Meters (Certification) Regulations 1998' to allow the adoption of DC meters for billing purposes:

- Schedule 7 of the Electricity Act 1989 that states:

'Regulations under this paragraph (Certification of Meters) may make different provision for meters of different descriptions or for meters used or intended to be used for different purposes and may include provision: (c) as to the procedure to be followed in examining, testing and certifying meters.'

• Waste - Definition of Waste

The need for a revised Waste definition in UK regulations

End of waste rules can make the development of waste derived products difficult and can stifle innovation, improvements to the Definition of Waste Panel are needed to support the development of new and innovative products. Engagement with the industry, regulators, and end users during the revision of end of waste positions will be key to ensuring they meet all stakeholders needs.

There are two parts to this and what is required to fix it:

- 1. The dichotomy between the waste hierarchy and the Circular Economy which results in waste being recycled into products for no particular reason when it could (save for Waste Hierarchy) be recovered into electricity, chemicals, syn oil etc. These latter uses are much more in line with the principles which underpin the Circular Economy and it is to be noted that the waste hierarchy predates the Circular Economy principles by some years. Now we are no longer in the EU we have an opportunity to make an easy change to the waste hierarchy without comprising environmental propriety.
- 2. The definition of waste itself needs changing. It is more than 30 years old and therefore the EU definition. It reads 'Waste' means any substance or object which the holder discards or intends or is required to discard.' Problems have arisen around the interpretation of 'discard' and indeed 'intends or is required to discard' I will give one quick example. When you buy a bottle of wine you are buying waste. You always intend to discard the bottle. The Regulator uses a strict interpretation of the definition. The CIWM are gaining some traction with Defra but it needs more impetus if a quick change (much needed by business) is to be made. The CIWM report on the Definition of Waste can be read here and deals with this issue in more detail, for example.

Food Waste & Garden Waste

Government committed 2 years ago to implement separate food and garden waste collections for households and food waste collections for businesses. Government should meet this pledge as soon as possible to increase the amount of feedstock available for treatment through AD and composting – accelerating these sectors.

Government must resolve the quality of food and garden waste collected for organics recycling by funding new technology at processing plants, and effective training, education and communication to improve the quality of materials. There is an opportunity under the collection consistency reforms for statutory guidance on quality

We urgently need Defra to publish the response to the consistency collections consultation and then the secondary legislation, to implement the Government's commitment to mandatory food and garden waste collections (as written into the Environment Act 2021).

We have members who have 'oven ready' projects, who are desperately waiting for this to press the green button on investment and build.

Case Study: Eco Sustainable Solutions, Bournemouth. Stalled food and garden waste plant:

- Planning and permits approved for 20ktpa AD plant in Bournemouth but not yet built due to the uncertainty on final regulations and implementation dates.
- Generates 1.44M kg biomethane for the grid
- Generates > 13,000MWh renewable electricity
- Direct capture of 4.5M kg carbon
- Plus annual saving of almost 22M kg of CO2
- 6 new jobs would be provided along with 2 apprenticeships
- Job security for 10 existing jobs
- Jobs provided within the wider supply chain

3. New Regulation or Regulator:

a. FSO Regulator Set Up (urgency required)

This is a critical role for the electricity industry to get to Net Zero. This needs to be an ambitious body with a long term vision and the tools to achieve joined up planning across networks. A Danish model of a 'System Architect' would be a positive model to follow as it proactively plans network development based on where future capacity may be built (or not), increasing efficiencies. In addition to this, we need to see Anticipatory Investment adopted to cater for future investment and development.

Grid connection delays and high costs is a key barrier to the Energy Transition for power, energy storage and EV charging projects. But there are also valid environmental concerns about building ever more overhead line that may not be necessary.

This can be implemented by swiftly finalising the Energy Security Bill (the enabling Primary Legislation) and subsequent Secondary regulations / consultations.

b. Geothermal Regulation

Geothermal is a key Net Zero technology but not adequately regulated for at present. Germany has a large geothermal industry and the UK could gain significant jobs and investment alongside renewable power and heat from supporting the sector more. We believe the following is necessary to incentivise Deep Geothermal in the UK:

- 1. Above all, recognition is needed in regulation that geothermal can make a significant contribution to Net Zero goals, and is therefore included on the list of technologies that are considered in regulation and legislation. Germany, France and the Netherlands all have plans to ramp up support for geothermal in recognition of its unique properties: eg being baseload, having a small footprint, suitable for urban development, scalable, without combustion processes. A White Paper, commissioned by BEIS (as was), we understand is being prepared for how to support the technology and its recommendations must be adopted and introduced as quickly as possible.
- 2. Streamline regulations and create a national licensing system to simplify the process of obtaining licenses and permissions for geothermal projects.
- 3. Centralise the administration of geothermal schemes to create a more unified and consistent approach to regulation and monitoring, rather than having these tasks managed by environmental regulator area offices and local planning authorities. This would lead to improved communication between the industry and regulator, the development of national expertise, and quicker decision-making.
- 4. Establish a sector-specific regulatory body or office within an existing regulator (such as the Oil and Gas Authority) to administer national licensing and regulations for geothermal operations. This would provide a single point of contact for the industry and ensure consistent regulation and support.
- 5. Provide adequate financial incentives and support for deep geothermal (GDI, CfD etc) to create a level playing field. Incentives should be guaranteed for a sufficient length of time to maintain investor confidence and provide assurance that incentives can be relied upon for the longer term to match their long-term investment profile. Provide sustained, long-term government support for the geothermal sector to encourage private financing, as

- was done for the offshore wind industry, which created jobs and investment in the UK supply chain.
- 6. A Ring fenced CfD budget for geothermal this round (Allocation Round 5) and the next, until the minima is reached: This would unlock at least another 2 projects this year, more next year.
- 7. Introduce a publicly funded insurance scheme that would bear part of the risk of a geothermal project, specifically early exploration risks. This could take the form of geothermal borehole insurance whereby a proportion of the project cost is reimbursed to the developer/ owner if temperatures or flow rates are not achieved, or it could take the form of underwriting of project costs and/or grants to develop deep geothermal projects.
- 8. Targets are important in the Netherlands geothermal accounts for 15% reductions in GHGs from heat by 2030, 25% by 2050: Germany: 100 additional projects by 2030, generating 10TWh/a, France 100TWh/a in 15-20 years.
- 9. Ambitious, long term heat decarbonisation policy for the UK: A replacement is urgently for the RHI, to support scalable heat production by geothermal, this could be limited to the first 30 projects to kickstart the market.
- 10. Geothermal electricity and heat must be added to existing support schemes: such as the Industrial Energy Transformation Fund (currently heat-only when it could replace gas CHP in some cases), and the Public Sector Decarbonisation Scheme (PSDS).
- 11. For the PSDS and other grant schemes, a recognition that it takes longer than 18 months to develop a geothermal site.
- 12. Internal team in the HSE to regulate geothermal: A quick decision is needed as to whether mining and quarrying or oil and gas HSE branches should look after geothermal.
- 13. Rules for Planning: there are some unsuitable precedents being set around rig heights for geothermal development. The rig is not a permanent structure (there for ~8 months max), so unless it is an aviation related issue, the height should not really be a planning concern. Recently one of the planning permissions in Cornwall has specified a rig of no more than 27m to assuage local concerns about visual intrusion for the temporary use. This will make the drilling very much slower, hence more expensive as rigs are on a day rate, and riskier as the operations will be at the limit of the abilities of such a small rig.
- 14. Do not change seismic monitoring: this is currently regulated under LPA mining and quarrying regulations which is appropriate and proportionate.
- 15. Relieve grid connection constraints for all, including small baseload developments. A South West England geothermal development now have a December 2036 energisation date. This is not compatible with CfD timelines and ensuring projects are investable.

c. BECCS

Regulations should support the fullest range of technologies, as we need as many different options as possible to reach Net Zero. Bioenergy Carbon Capture and Storage (BECCS) projects have been identified by the CCC as critical to net zero and a major industrial opportunity.

Final Decisions of Bioenergy Carbon Capture and Storage Business Models have been delayed, slowing financing decisions – speed these up: Government must make a final decision on and delivery of the Power BECCS business model.

The industry needs to see the Energy Security Bill and its support for these projects, passed as soon as possible.

d. Thermal Storage

The role of Thermal Storage is poorly recognised in heat and power policy; the explicit inclusion of Thermal Storage in heat and power policy is needed for example in future heat support.

The Installation of domestic energy storage in people's homes needs to be 0% VAT rated (currently charged at 20%) and DESNZ and HM Treasury should add Energy Storage to the list of Energy Saving Materials – this will allow its installation to be charged at 0% VAT and drive deployment of energy efficiency measures.

Further REA High Level Feedback to Review Discussion Questions

- 1. Are there any specific priority technologies this project should consider in addition to the below: Hydrogen, CCUS, nuclear, renewables (e.g. offshore wind, solar), circular economy, recycling and re-use of materials, EVs, nature-based solutions
 - This project should support the fullest range of technologies, as we need as many different options as possible to reach Net Zero. This includes:
 - Deep geothermal, a proven technology that is ready to be deployed in the UK through a minima in the next CfD round and by developing an appropriate regulatory environment. There is currently little significant decarbonisation of heat by intensive heat users such as hospitals, airports, industrial plants etc and geothermal offers a great opportunity to decarbonise.
 - A wide range of renewable heating technologies, including heat pumps, deep geothermal, hydrogen, green gas and biomass boilers. The project should also support innovative energy saving mechanisms.
 - Long-duration energy storage, which currently has no route to Market. Government must speed up decision and delivery on Cap and Floor Mechanism for Long Duration Energy Storage.
 - Innovative biomass feedstocks for example by properly rewarding landowners for environmental benefits of growing innovative biomass feedstocks like Miscanthus and Short Rotation Forestry Crops. This could be done through Defra's forthcoming Environmental Land Management Scheme.
 - Thermal Storage for example by explicitly including Thermal Storage in heat and power policy making and support schemes (eg the Smart Export Guarantee).
 - Advanced Conversion Technologies (Gasification and Pyrolysis) currently regulated in line with waste incineration in most instances but a separate technology class. For example the EA needs to be better funded to build their evidence base and understanding of syngas, enabling them to better regulate ACT technologies as separate to incineration.
 - Advanced gases and biofuels particularly in the UK rail and aviation sectors.
 - Bioenergy Carbon Capture and Storage (BECCS) for example by accelerating the Energy Security Bill's adoption.

2. Please provide examples of quick wins for pro-innovation regulation in your sector/technology areas

2.1 Circular Bio-Resources

- End of waste rules can make the development of waste derived products difficult and can stifle innovation
 - Improvements to the Definition of Waste Panel are needed to support the
 development of new and innovative products. Engagement with the industry,
 regulators, and end users during the revision of end of waste positions will be key to
 ensuring they meet all stakeholders needs.
- Environmental permitting resolve delays and inconsistent enforcement
 - Properly fund EA to be able to increase the numbers of staff looking at permitting applications and ensure that existing regulations are consistently enforced.
- Resolve the quality of food and garden waste collected for organics recycling
 - Fund new technology at processing plants, and effective training, education and communication to improve the quality of materials. There is an opportunity under the collection consistency reforms for statutory guidance on quality
- Increase the amount of feedstock available for treatment through AD and composting
 - Government committed 2 years ago to implement separate food and garden waste collections for households and food waste collections for businesses. Government should meet this pledge as soon as possible.

2.2 Heat

- Local gas networks have low capacity adopt in-grid compression more widely
 - In-grid compression needs to be more widely adopted and supported by the gas distribution networks. Bureaucratic and regulatory barriers from the network operators and Ofgem need to be removed to allow proven technologies to be adopted.
- Heat Pumps could place excess loads on the electricity grid update grid investment rules to reinforce ahead of need
 - Upgrades to the electricity grid are needed to ensure increased power demand from individual households is met
- The running costs of low carbon fuels and technologies using grid electricity are currently greater than similar costs for fossil fuels (gas and oil) increasing the Carbon Tax would level this and incentivise a move to lower carbon options.
 - Carbon taxation on fossil fuels used for heat but only with mitigation measures in place to protect the fuel poor
- Biomass boiler filtration technologies are in their early stages, and need a route to market adopt an R&D approach then require adoption via regulation
 - o Provide Research and development support for biomass boiler filtration
- The methodologies behind EPC certificates (SAP and EPC) are outdated and need reform
 - Reform the SAP methodology in line with the CCC's recommendations (January 2023, <u>Available Here</u>)

2.3 Power & Flexibility

- Grid Capacity Constraints are holding up new low carbon generation and innovation in energy storage – adopt new queue management techniques and allow investment ahead of need
 - National Grid and DNOs to urgently address que management process, including the prioritise energy storage in order to free up capacity
- Provide Long Duration Energy Storage with a route to Market
 - Government must speed up decisions and delivery on the Cap and Floor Mechanism for Long Duration Energy Storage – support has already been committed to, a mechanism just needs to be selected.
- Final Decisions of Bioenergy Carbon Capture and Storage Business Models have been delayed, slowing financing decisions speed these up
 - Government must make a final decision on and delivery of the Power BECCS business model as well as seeing through the Energy Security Bill
- Innovative Biomass Feedstocks need a route to market
 - Properly reward landowners for environmental benefits of growing innovative biomass feedstocks like Miscanthus and Short Rotation Forestry Crops. This could be done through the Environmental Land Management Scheme
- Reform Planning to speed up decisions on low carbon generation
 - Reform the National Planning Policy Framework (NPPF) to appropriately prioritise low carbon generation and ensure local authorities are appropriately resourced to deal with planning applications.
 - Provide Permitted Development (PD) Rights to small scale wind turbines for buildings up to 30 metres height would match with PD rights for mobile telephone masts. This could be affected through the NPPF reforms as well.
- The Installation of domestic energy storage in people's homes needs to be 0% VAT rated (currently charged at 20%)
 - Add Energy Storage to the list of Energy Saving Materials this will allow its installation to be charged at 0% VAT and drive deployment of energy efficiency measures.
- The role of Thermal Storage is poorly recognised in heat and power policy.
 - Explicit inclusion of Thermal Storage in heat and power policy is needed for example in future heat support.
- Advanced Conversion Technologies (Gasification and Pyrolysis) needs separate regulation approach to that for waste incineration
 - Provide funding to the EA to better build their evidence base and understanding of syngas, enabling them to better regulate ACT technologies as separate to incineration.
 This will enable deployment of a wide range of ACT based products.

2.4 Transport

- Enable the use of advanced gases and biofuels in the UK rail and aviation sectors in particular.
 For example, extend E10 provisions beyond the 10% mix upwards to E20 using existing Legislation.
- Support ambitions for at least one UK gigafactory for the production of UK energy storage and EV batteries and keep pace with the growth in supply chains in the US and EU.
- Equalise VAT rates for electricity used for at-home and public EV charging supplies- reduce the VAT rate for public charging to 5% as well.
- Reform the Wayleaves process so that EV charging infrastructure and related equipment is afforded the same rights as Telecommunications equipment. This could be done via a change

to the relevant Act affording such equipment these rights to extend it to EV and renewable energy infrastructure.

3. Please outline any regulations (or the lack of regulations) that have already been identified as barriers for your sector/technology

- The lack of long term heat decarbonisation and associated energy efficiency policy and funding has held back progress in decarbonising homes and buildings for years clear, long term policy is needed here.
- Inconsistent and lack of joined up application of rules regarding electricity grid connections, delayed DNO and planning decisions hamper onshore renewable developments.
- Lack of appropriate regulatory environment for deep geothermal technology. For example affording geothermal developers similar rights to those assigned to hydraulic fracturing is a quick win.
- The government's delay in a decision on and delivery of a Cap and Floor Mechanism for Long Duration Energy Storage projects must be addressed support for a mechanism has been agreed to in principle but the final support still needs to be finalised.
- Poor recognition of thermal storage in heat and power policy needs to be addressed and support provided.
- Advanced conversion technologies (Gasification and Pyrolysis) are currently regulated in line with waste incineration in most instances.
- Delay and inconsistent enforcement of environmental permitting.
- Bureaucratic and regulatory barriers from network operators and Ofgem for in-grid compression for local gas networks.
- End of waste regulatory barriers stifling innovation in developing products derived from waste.
- Outdated SAP and EPC methodologies.
- Delayed final decisions of bioenergy carbon capture and storage business models slowing financing decisions.
- Reform planning to speed up decisions on low carbon generation.
- Reform VAT rates to align public and at home EV charging costs. Currently private charging is
 only 5% whereas public is 20%. At a time when the cost of living could delay the EV roll out and
 some media publications are claiming that EV charging is more expensive than petrol, a quick
 and easy way to aid EV uptake would be for the VAT rate for public charging to be reduced to
 5% as well.
- Commit to an ambitious Zero Emissions Vehicle Mandate for sustainable transport, this requires ambitious targets for the sale of new EV cars and vans from next year.

4. Please outline any other issues to consider which could affect the project scope or timelines e.g., parliamentary bills, international negotiations etc

- Political instability and changes in government policies have a very negative impact on market development and stable long term policy is key.
- Availability of funding and investment being negatively impacted by wider economic changes such as high inflation.
- Supply chain disruptions and the reduced availability of materials delay project development.
- Changes in consumer behaviour can be positive but take time to feed through to on the ground action campaigns regarding this need to be long term and well-funded,

- Planning delays and Local community opposition to new renewable energy projects could lead to legal challenges and delays in implementation. These could be reformed as part of the Levelling Up Bill NPPF Planning consultation.
- Regarding Parliamentary Bills it is essential the Energy Security Bill proceeds as quickly as
 possible to provide the foundation for hydrogen growth and BECCS (Bioenergy with Carbon
 Capture and Storage).
- The UK only spends 1.7% of GDP on R&D, compared to over 3% in the US we need to ensure R&D funding is expanded and actually goes towards innovation and more generous R&D tax credits
- Many Government support schemes (eg the Industrial Energy Efficiency and Public Sector Decarbonisation Scheme, the Smart Export Guarantee) only run for one to two year periods, meaning longer term projects like geothermal are unable to take advantage of this policy support
- Policy schemes like the CfD are incredibly complicated, requiring SMEs to turn to consultancies to understand them and adding costs.

5. Who are the key regulators in your sector/technology area

- Circular Bioresources, Composting, AD and Organics to land: the Environment Agency and associated devolved regulators: SEPA; Natural Resources Wales (NRW); Northern Ireland Environment Agency (NIEA). The Animal and Plant Health Agency (APHA), Health and Safety Executive (HSE)
- Deep geothermal: Ofgem, and the Environment Agency (EA and devolved equivalents)
- Renewable heating technologies: Ofgem, and the EA
- Long-duration energy storage: Ofgem
- Biomass feedstocks: The EA
- Thermal storage: Ofgem
- Advanced Conversion Technologies: the EA
- Advanced gases and biofuels: EA, HSE
- Heat pumps: Ofgem
- Low carbon fuels and technologies: Ofgem, HSE
- Power and flexibility: Ofgem
- Bioenergy carbon capture and storage: Ofgem, EA, HSE
- Energy storage: HSE, EA, Ofgem

6. Do you have views on how regulators can change how they work within existing organisational and legislative structures to drive innovation in your area? (what could happen immediately that would make regulators change?)

One immediate change is proper funding for relevant regulatory organisations, such as the Environment Agency (EA) and devolved equivalents eg SEPA, to increase their staff and improve their evidence base and understanding of different technologies. Additionally, regulatory barriers, bureaucratic and otherwise, need to be removed to allow proven technologies to be adopted. For example, the in-grid compression technology for low-capacity local gas networks needs to be more widely adopted and supported.

Moreover, the inclusion of advanced conversion technologies and innovative biomass feedstocks in energy policy and their route to market needs to be prioritised. Finally, there needs to be a reform of

the planning national policy framework to speed up decision-making on low carbon generation and ensure that regulations are consistently enforced.

On the electricity grid, the regulator Ofgem must be effectively resourced to do its job and must hold the DNOs to account more for customer service and the consistent application of rules – currently the implementation of these vary widely across the six DNO regions and this is very damaging for developers of renewable power and flexibility projects.

Additional Information - Specific follow up questions from the REA Discussion

Further examples of the Environment Agency / Regulator resource problems causing barriers for the Green Tech industry - feedback provided by Dr Hilary Stone, Imperial College

- 1. On 8th February 2022 an application was made for a Resource Framework for tyre pyrolysis oil. The EA indicated on 7th March 2022 that they would take the matter forward and on 17th March 2022 their offer was accepted. An internal EA meeting took place on 5th May 2022 and on 12th September 2022 the EA held the first meeting of the Task and Finish group. However as members of the relevant team were no longer in post nothing further was heard. The minutes of the first (only) meeting have not been sent out by the EA and formal complaints were made both to the EA and to Rebecca Pow Defra in December 2022. Replies though unhelpful were received and 13 months after the original application was made no progress has been made. However it is understood that a new EA Chief Scientist is now in post and that relevant team members will be appointed. When is the question and will the Resource Framework team be ramped up so that it consists of more than [existing skeletal resource]. This is simply not good enough and the delays prevent businesses developing.
- 2. A former REA member has a site in England (anonymised here). The permit application was made more than three years ago. The EA received an environmental permit application in 2019 and signified that it had been "duly made" in June 2020. There have been two public consultations but the permit has still not been issued. The statutory time frame for grant of permit is 4 months after the application has been duly made. The Regulations provide that if the regulator has not determined the application within the prescribed time, the applicant can notify the regulator that it considers the application to have been refused this gives rise to the right to appeal but gets the applicant no closer to the issue of a permit. Contentious permit applications are common in this area the EA hinders business by submitting to pressure for public consultations beyond what is required by statute. I asked for permission to give more details and this is the reply I received "If we already had the permit in place, it would be a different story, but shining a spotlight on this before it's concluded could slow the process down further and use up yet more resources. Even positive external support would no doubt be fuel to the objectors' fire and could make things worse. I'd be much happier if it didn't get additional attention at this point" this is indicative of the problems faced.

The Potential for capturing the renewable energy from garden waste

There is about 5 million tonnes of garden waste currently being composted. There is the potential to capture the renewable energy from this if treated through dry AD whilst also continuing to produce

much needed soil improvers to provide organic matter to soils (improve soil health and help to capture carbon etc). There are some existing composting facilities that may be able to diversify into dry AD if there are the right investment conditions. In the past, capital grant funding from Government was instrumental in getting In Vessel Composting sites built. We need to change how public procurement is regulated to move from a focus on price alone, and to have greater recognition of the value of carbon to facilitate the right investment conditions to capitalise the potential of garden waste.

Metering for Solar PV sites (enabling DC) - unlocking at least £500m more investment

This is a regulatory change that could be made to help unlock further large scale solar development. Please refer to the more detailed accompanying presentation on this issue as well.

One large scale solar developer at the REA states that solving this issue could result in up to 25 more projects and £500m more investment, from their pipeline alone.

Benefits of DC metering

Having a single set of inverters pose a reduced risk to grid fault levels, resulting in lower capacity constraints for Grid Operators to manage and improving headroom before reinforcement is required. This lowers both up front and ongoing maintenance costs, by only requiring one set of inverters.

This allows solar and storage projects to be built for less overall, delivering savings to consumers and governments now and in the future.

How to enable this:

- The issue has been raised with OPSS and we are expecting guidance to coincide with the CfD guidance that they are to issue on the use of DC meters.
- If they do not allow the use of DC meters, then secondary legislation will need to be created/added to 'The Meters (Certification) Regulations 1998' to allow the adoption of DC meters for billing purposes
- The key point is that *DC* metering is expected to expand considerably with the use of *DC* charging infrastructure for Electric Vehicles, so it would be advised that legislators consider implementing *DC* meter regulations as soon as possible, given secondary legislation being a lengthy process

This can be provided for via secondary legislation:

If they do not allow the use of DC meters, then secondary legislation will need to be created/added to 'The Meters (Certification) Regulations 1998' to allow the adoption of DC meters for billing purposes:

- Schedule 7 of the Electricity Act 1989 that states:

'Regulations under this paragraph (Certification of Meters) may make different provision for meters of different descriptions or for meters used or intended to be used for different purposes and may include provision: (c) as to the procedure to be followed in examining, testing and certifying meters.'

Annexes

This Briefing is sent with the following Annexes:

- REA and ARUP report on the potential for Geothermal in the UK
- Further information on solar PV DC metering issues
- REA Briefing on Environment Agency problems