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| **Combined PPA and Heat Supply Agreement** |
| **Pros** | **Cons** |
| Only one contract to be executed | More complicated if PEC decides to reorganise its portfolio and wants heat and solar kit in separate ownership |
| PEC/Property owner only needs to look in one document to find out their rights, obligations, contact details for notices etc | Different practical considerations for each technology |
| No need to repeat boilerplate clauses which are likely to be the same for both – could have 1 front end agreement with a separate schedule for each so both don't always have to be included. | More complicated if the term of heat supply will be different from electricity supply |
| Only one contract to be terminated if lease terminates/breach by occupier etc | More complicated to subcontract an element of the service |
| Clearer how energy generated by solar panels is to be used if for both electricity and solar thermal. | Longer more complex agreement – less user friendly |

**Advice note on proposed electricity and heat supply arrangements**

**Combined or separate PPA and Heat Supply Agreement**

PEC Renewables is proposing to act as a service company for the supply of electricity and heat. A variety of technologies are being considered including ground or air source heat pumps, solar thermal, solar PV and thermal storage. Given the recent Government announcement on the new Green Homes Grant householder interest in this type of service will likely be on the increase.

PEC Renewables is considering how to structure the legal contracts that will allow this service to be delivered. A key consideration is whether the PPA and Heat Supply Agreements should be combined as one agreement or kept separate. We have considered the pros and cons of combining the two agreements below.

On the basis of the table below we consider that it would be preferable to keep the agreements

separate to give PEC Renewables more flexibility with how it manages its portfolio in the future.

**Advantages/Disadvantages of adding storage**

PEC Renewables has also asked us to consider the pros and cons of incorporating storage with solar and/or thermal storage with the heat supply. Whilst this is not an exhaustive list, we have considered some of the key practical and legal pros and cons below for your consideration.

**What difference would it make if PEC included storage with the solar?**

Pros:

* Potential to increase returns from solar PV - If the panels produce more power than the property needs the energy can be stored and sold to grid at peak times or to the property owner for an additional fee if they need more than agreed amount.
* Some agile tariffs (Octopus Agile tariff specifically), really only stacks up with storage engaged so that peak pricing is avoided in the evenings when the PV isn't generating.
* Limited maintenance
* Relatively simple to incorporate within PPA if considered at the outset. Harder to retrofit.
* Financial case likely to improve if EV charging is considered likely for homeowners.

Cons:

* Additional space needed for storage unit
* More intrusive to install storage as would be inside the property – potential access issues
* Greater fire risk, and potentially might need disclosing to insurers. Might this have an impact on buildings and contents insurance?
* Additional cost of purchasing and installing the storage system
* May not last as long as the PV array, so will likely need to be replaced or repowered after 10 years or so.
* The Smart Export Guarantee will allow, but does not oblige, electricity supply companies to include battery storage as part of their tariff. However, the electricity supplier may not offer Smart Energy Guarantee tariff or may offer a different tariff for electricity exported from a storage unit, so a careful look at the finances may be necessary. However, when combined with an agile tariff, the potential savings from solar + battery (including returns based on negative pricing), may well outweigh any reduced SEG.
* Need to consider any lease/mortgage restrictions which may affect the installation of a storage system. This has typically not been a great issue in our experience, but particularly post the Orsted fire at Carnegie Road, there may be additional issues cropping up with mortgagor or landlord's consent.

**What difference would it make if PEC included thermal storage with the heat supply?**

Pros

* Ability to store hot water for when it is needed
* Allows renewable heating system to work more efficiently – air source or ground source heat pumps will work more efficiently with less wear on the pump and compressor if it does not have to continually cycle on and off when the demand for heat is low.
* Solar thermal – thermal stores can be designed to prioritise heat from solar panel
* Ability to install smart controls so you can convert spare electricity generated by solar panels into heat which can be stored for later.
* Enables more efficient use of solar panels and heating system

Cons

* Greater fire risk
* Building insurance premium likely to increase
* More intrusive to install/maintain storage
* Requires additional space which may not be available in all properties
* No RHI available if solar water heating system combined with a thermal store as heat is being used for a purpose other than hot water
* Additional drafting in heat supply agreement
* Need to consider any lease/mortgage restrictions which may affect the installation of a storage system