

apse online seminar

APSE Central Region Event

Building Resilience and Strengthening Communities



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Overview of AceOn's Virtual Power Plant: RENEWERGY®

APSE CENTRAL REGION – 15 December 2020

*"Offering solutions today for
tomorrow's world"*

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ACEON - WORKING IN PARTNERSHIP NATIONALLY & INTERNATIONALLY



AceOn have a unique combination of a wealth of public and private experience as well as in-depth knowledge of the battery storage and energy sectors. AceOn have been chosen as the national partner of both the Association of Public Service Excellence and the National Housing Federation. We work in direct partnership with leading national and international manufacturers of Electric Vehicle Chargers, Domestic and Commercial Battery Storage Systems, Solar PV Panels, and Air Source Heat Pumps.



Association for Public Service Excellence -
Exclusive Approved Energy Storage Partner to **114 member councils**



National Housing Federation -
Exclusive Energy Storage Sector Supplier to **800 Housing Associations**



Microgeneration Certification Scheme (MCS) -
Helped **create and develop** the Battery Storage Standard (MIS 3012)



Solar Trade Association -
Influential **member and partner** shaping government policy

“The Telford Company Taking on Tesla”

Partners



ACEON WORKING IN PARTNERSHIP – ONE STOP SOLUTION PROVIDER



DOMESTIC BATTERY ENERGY STORAGE SYSTEMS – For New-Build & Retrofit

VIRTUAL POWER PLANT – RENEWERGY Smart Energy Management Platform: Optimisation, Aggregation and Trading

ROOF-INTEGRATED SOLAR PANEL ROOF TILE - Marley SolarTile®, Viridian Solar For New-Build & Re-roofing

ELECTRIC TRANSPORT – EO Smart EV Chargers: Home & Work, Electric Bike Shelters

SOLAR PV – FUTURASUN On-Roof Solar PV Panels

COMMERCIAL & INDUSTRIAL BATTERY STORAGE – Larger Scale Container Batteries from 9kWh to 5MWh

AIR SOURCE HEAT PUMPS – Samsung Heat Pump, Controls & ClimateHub Integrated systems

ELECTRIC PANEL HEATERS –ADAX SOLAire slimline Electric Panel Heaters, Towel Rails and Radiators with Smart controls

RENEWABLE ENERGY INFRASTRUCTURE – Working with Gridserve on Solar farms, Electric Vehicle Forecourts/Hubs

CUSTOM BATTERY PACK DESIGN, MANUFACTURE & BATTERY DISTRIBUTION – We have our own brand of Batteries.



**HOW OUR VIRTUAL POWER PLANT
CAN HELP TO
BUILD RESILIENCE
&
STRENGTHEN COMMUNITIES**

INTRODUCING OUR VIRTUAL POWER PLANT (VPP)



ENERGY – GENERATE & SAVE MONEY – SAVE & GENERATE PLANET – SAVE & REGENERATE!

OUR RENEWERGY VPP PLATFORM: 4 SMALL STEPS, 1 GIANT LEAP FORWARD!



Our Virtual Power Plant (VPP) called RENEWERGY® is a network of houses and flats, each operating as a micro-energy regeneration centre through the installation of Solar Panels and Energy Storage batteries that are virtually connected together through our pioneering Smart Energy Management Platform.

As a VPP, we manage that energy smartly and proactively to predict demand and supply, meeting the needs of the householder and enabling spare energy capacity to be aggregated together and traded with the Grid to generate extra revenue, whilst also reducing CO2 emissions through optimising the use of solar generation to minimise the amount of energy imported to site.

Effortlessly connect a home energy storage system to our RENEWERGY Platform and we can do the rest...



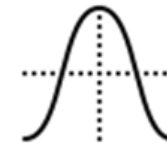
CONNECT

The Platform connects easily via API to battery storage, PV panels, electric heating and EV chargers. Once connected **the consumer and owner is able to monitor the performance of their assets tracking generation, consumption and savings.**



LEARN

Once connected, **we learn the consumption and generation pattern for the site.** This includes the usage patterns of the electric heating and EV charger.



OPTIMISE

Our advanced algorithm forecasts consumption and generation using weather data. Each asset connected to the platform is then scheduled to operate **to minimise energy import into the site maximising savings and carbon reduction.**



MONETISE

The RENEWERGY Platform learns when there is spare capacity in each system. **The spare capacity across the RENEWERGY Platform is then traded with the National Grid, and Local Distribution Operators. We share this revenue with our partners.**

VIRTUALLY CONNECTING HOMES TOGETHER TO MAXIMISE THE SUSTAINABLE BENEFITS

- The price of electricity has increased by 7% pa since 2005.
- For a home today using 3,500 kWh pa, this equates to £694/yr.
- Following a 7% pa increase, bills would rise to £1,192 in 2030.
- Our VPP helps to insulate tenants from the full extent of these increases AND creates a Revenue stream from the capital investment for the Landlord



- **ECONOMICALLY:** Grid Services could deliver gross income Year 1 of c.£250. We anticipate increasing this as prices increase.
- 100 homes in the VPP could fund over 14,000 hours of home care or create 28 apprenticeships over 10 years.



- **SOCIALLY:** RENEWERGY aims to reduce a tenant's electricity bill by up to 70% - reducing the cost of living, tackling fuel poverty and enabling affordable warmth in the short-term and helping to lift households out of poverty in the long-term by creating a more resilient household budget.



- **FINANCIALLY:** Our RENEWERGY VPP enables tenants to use more of the electricity generated by the solar PV.
- A specific Service Charge or Rental Top up provides a secondary revenue stream option for the landlord to consider.



- **ENVIRONMENTALLY:** By maximising renewable energy usage the carbon footprint of each individual household is reduced by on average 70%.

NB. Requires Internet or 3G Connectivity. VPP Lead-in time approx. 12 weeks

KEY BENEFITS OF THE RENEWERY VIRTUAL POWER PLANT



- 1. Increasing Energy Independence** – adding Battery Storage enables a Tenant to utilise directly much more of the energy generated from the roof, reducing the amount of energy exported to the Grid. Solar PV alone usually enables around 30% of energy to be used directly. Adding a Battery can increase this to c.50%. Connecting the Battery with our VPP Platform’s Smart optimisation algorithms, could increase this to 70% + - which saves them more money every month and every year.
- 2. Tackling Fuel Poverty** – a typical annual saving on a Tenant’s electricity could be over £350, rising to £581 in 2030.
- 3. Helping to Lift Households out of Long-Term Poverty** - Solar PV Plus Battery maximises the Tenant’s savings on their Electricity Bill. Electricity prices are projected to rise by 5 – 7% every year and the battery storage therefore provides the greatest certainty and minimisation of Bill increases in a volatile future electricity market.
- 4. The VPP Can Create a ‘Green Dividend’ for the Council/Housing Association** – working the battery smarter and harder through the Grid Services we will deliver through our VPP can create a revenue stream from the capital monies invested. We can’t guarantee the level of this income stream but we aim for c.£250 pa in Year 1. The Council/Housing Association also has a choice to introduce an additional rental service charge for tenants, reflecting the significant savings that the investment has enabled the tenant to make. Without the Battery, these income streams cannot be realised.
- 5. Safety & Security** – our VPP enables the lights to stay on for your Tenants if there is a Grid power cut and in the background our system can remotely monitor usage in the home for more vulnerable Tenants and raise an alert with the Council/Housing Association if energy usage noticeably drops over 2-3 days.

...Even More **BENEFITS OF RENEWERGY VPP**



- A **future-proofed model** – can be upgraded to integrate with EV Charging and Heat pumps within our VPP.
- **One stop UK shop** for customer support and servicing.
- End of life battery **recycling** by AceOn.
- Delivering on **local and national Net Zero Carbon**, Climate Emergency and Future Home Standards targets.
- Supporting the demands of the **Energy network** and the need/demand for more ‘green’ electricity.
- The more homes that we can include within the RENEWERGY Partnership, **the more EVERYONE CAN SAVE AND EARN.**

LGC 26/11/20 – “PWLB Rates Cut As Ban On Commercial Investments Comes Into Force”



LGC @lgcplus

PWLB rates cut as ban on commercial investments comes into force

lgcplus.com/finance/pwlb-r...



13:30 · 26/11/2020 · Auto-tweet-LGC

6 Retweets and comments 4 Likes

A cut to the cost of borrowing from the Public Works Loan Board announced at yesterday’s spending review will take rates back to where they were a year ago, LGC has been told, but councils will face more checks when seeking a loan from the board.

Treasury spending review documents revealed the government would press ahead with the reforms to rules on borrowing from the PWLB it consulted on earlier this year. This will mean “ending the use of the PWLB for investment property bought primarily for yield, which presents a risk for both national and local taxpayers,” the papers said.

Under the new rules, councils seeking to borrow from the PWLB will now have to provide a three year capital plan, confirming it does not intend to borrow primarily for yield at any point

The RENEWERY VPP Enables Capital Borrowing & Investment that delivers:

- **Net Zero Carbon Targets**
- **More Affordable Warmth**
- **Reduced Fuel Poverty**
- **A Means To Reduce Long-Term Poverty**
- **AND a Supplementary Revenue Stream To Support Service Delivery**

RENEWERGY WORKING IN PARTNERSHIP – FOR ALL HOUSING TYPES



RENEWERGY can be delivered in partnership with a Council, Arms-length Council company, Housing Association, Private Home Owner or Private Landlord.

RENEWERGY can be delivered as an integrated package in new-build homes for purchase or rent – AND retro-fitted into existing homes.

If you're also planning a major re-roofing or Solar PV programme on your social housing, it's the perfect time to consider RENEWERGY.

RENEWERGY can work for you and...

- **Your Social Housing Tenants**
- **Your Private Rent Tenants**
- **Your Employees as a Salary Sacrifice Scheme**

We have different operating and funding models for different types and forms of housing – **we'd like to talk to you about these.**



“Offering solutions today for tomorrow’s world”

THANK YOU FOR YOUR TIME

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