

could include transport needs also. So PV could be used to assist businesses' power and transport needs?

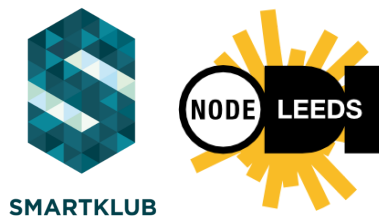
Top 20 list released by end of August (latest). Then approach these companies with request for a plan to do something about their footprint. This could create exemplar projects for PV and balanced system.

Learn about how we balance the solar and storage and may be heat and transport. Then extend this to smaller organisations (plan is to find next 50 or so after the top 20 have been found etc.).

Idea 2: Ensure transparent reporting for PV across all projects

We want to avoid a PPI type misselling scandal of PV in Leeds. So can we create a way of measuring and publishing the generation data so we can hold suppliers to account and establish best practice. Sheffield (Microgen database by Sheffield solar - a national database) does something like this on a voluntary basis where PV owners can submit their readings. Could we extend this to demand data and so effect behaviour change.

We would allow voluntary reporting of energy data (demand and generation) - is this best done by extending the scope of Sheffield or by Leeds doing its thing. Needs a Leeds ODI hackathon and ability to anonymise while also spotting issues and letting owner know.



Notes, comments, questions, etc:

<https://www.solar.sheffield.ac.uk/pvlive/>

<https://odileeds.org/events/solarleeds/data.html>

SmartKlub Leeds
Solar Solutions for Leeds City Region
Co-production Session

26 July 2017
ODI Leeds, 3rd Floor, Munro House
13:00 - 16:00

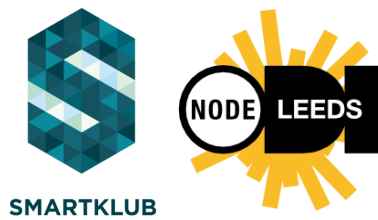
Leeds City Council is constantly working with partners to identify opportunities for the Council and the City. This has recently included a number of opportunities relating to the development, funding and creation of solar energy generation assets.

The objective of this workshop is to use the framework of [SmartKlub](#) Leeds and co-produce an outline delivery plan for solar energy Projects across its and the wider public sector estate.

The specific aims of the workshop are to explore the opportunities, business & funding models for solar energy at scale in Leeds, and understand the delivery & business models that The Council and Partners could use to deploy solar energy at scale across the City.

You should attend if you would like to influence how these projects are developed for the benefit of the City.

You could be solar energy technology vendors, renewable energy solution providers, solar energy funders, energy system designers, urbanists, energy specialists, energy companies, technologists or technology businesses, energy infrastructure investors or anyone with an interest in the energy system of Leeds.



Attendance:

Charles (SmartKlub), Chris (Newcastle Uni soon to move to Leeds), Andy (Zero Carbon Yorkshire), Raphael (LCC) Table

Idea 1: targeting solar PV at the right organisations first in a balanced way

Need to balance solar growth with other technologies like storage and heat to ensure UK needs met in winter too.

Opportunity to match the demand data (HH) with potential for solar and storage to understand system vire over 12 months.

Can we identify large energy users (from Raphael's work) that could have a large part of the demand met by solar? Also, can we persuade the large users to become leaders in change rather than polluters?

An we identify organisations that have a transferable load (e.g. power demand, heat demand, AC, refrigeration) that can be balanced or time shifted?

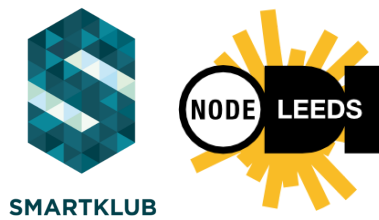
We need to ensure we find a balance position of optimised demand and generation so that we can scale a balanced position, rather than forge ahead with solar and create an imbalance with frequency and reactive power problems.

Can we create a directory of demand based on type of organisation? We need to find enough demand to make a meaningful start on balancing system, but not be too forensic about a perfect set of data as this is unlikely to happen quickly.

Raphael trying to find top 20 of the highest carbon emission organisations. If we could then identify which of the 20 best fit a solar demand and which balance with each other over 24 hours. This

<https://www.cngltd.co.uk/news/proud-to-be-bigger-than-profit>

<https://prezi.com/view/azSG1fnSznry4tkKQSLr/>



CNG - engaging with schools and students to increase knowledge and uptake of solar technologies -

(Link for presentation above)

Contact into the schools and Trust academies whilst working a model with local authority.

The Led offer also need discussing

Workable model on half hourly data of a site example

Further discussions under NDA

JH - LCC - Barrier in the form of Engie energy contract prohibiting uptake of CNG offer by schools. LCC to investigate terms of contract to determine if any amendments can be made re: this & other offers.

JH - LCC - Leeds City Council to deliver more clarity around solar PV needs/wants for potential suppliers to work with. LCC to work with Engie to ensure all half hourly data uploaded to Data Mill North to improve solar PV modelling

<http://www.egnida.co.uk/>

Helping to alleviate the issues hindering the uptake of electrical vehicles; how best can we do this?

£100m pre-approved green investment fund for public sector solutions - ready for deployment!!

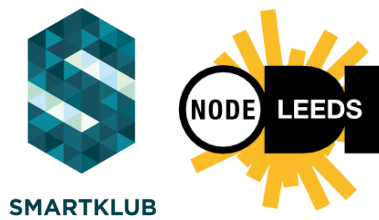
<http://www.projectscene.uk/> - community scale energy networks

Pragmatic innovation as a key driver for projects

What's the fairest way to share the benefits within a community?

There's no definition of 'criteria' and 'targets' at a council level. What are the legal requirements?

The creation of a roadmap; who are the correct stakeholders to deliver, give timescales etc



Engie is Leeds City Council's energy supplier - very difficult in getting access to the council's energy consumption from the supplier on a regular basis - how do we get access to this data?

This data is already published but only on an annual basis - needs to be real-time or near real-time (at least published on a nightly basis) >

<https://datamillnorth.org/dataset/council-energy-consumption>

Need to improve Business Intelligence to better understand the estate. Which buildings are the most inefficient? - target these first.

Need to understand ALL land usage across the city to make better use. Small parcels of land could house battery storage sites - look into battery storage to make better use of energy - store when not needed and access when required.

The council is open to adopting a number of different solutions. Doesn't need to be a 'one size fits all' approach.

A defined roadmap to entry; from getting an initial idea to a completed project

Between contractors and the council

At the start, should this journey be started – need to see a clear route to the end project

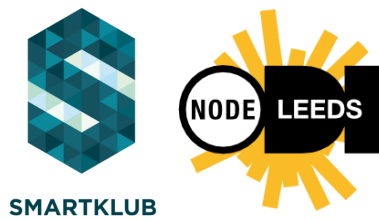
Communication of the council strategy clearly and coherently; what's the size and scale of their ambition?

Energy consumption data; when it's used and how much is used? Very much building dependent. High use Industrial, pays for itself while social housing need rely on storage (people may not be in at the time of generation). How are the battery's funded on top of the energy generation system?

Can Leeds provide additional information ?

- An indication of budget and risk strategy (appetite)
- Minimum payback \ ROI term expected.

- Assets with a 20 year + life expectancy including available land (Could be used as Solar Farms)
- EPC surveys for buildings



- Asset Roof building material, electrical connections (space etc), voltages etc.
- Connection agreements etc.
- 30 Mins power data (12 months +) per building
- Is there an Energy Demand profile prediction for the estate?
- Most recent bill confirming current tariff and Supply contract summary.

- Is this a discrete Solar project or a wider Energy project?
- Are there learning outcomes from the initial solar panel deployment on Social Housing?
- Does the council want to incorporate O&M as part of the contract? Multi-supplier?
- Publish Carbon Reduction Targets – Allowing individual projects to contribute
- Is there scope for out of town co-developed generation schemes with other Councils?
- Is there a Carbon Transition plan on power supply agreements?

- Roadmap to entry; getting an initial idea to a complete project.
- Needs the council to define what it is that they want, the scale of their ambition, what they are willing to go to. This needs to be clear.
- Councils need to make the details clear (clarity), better project can be designed specifically to it, an understanding of the funding.
- List of contractors, their size and what they can deal with, made available for the tender process.
- Access to consumption data; size and use of the building is key. Projects for high use industrial pays for itself while smaller social housing may need to rely on additional storage (people may not be in at the time).