EUROPEAN COMMISSION

Directorate-General for Communications Networks, Content and Technology
Directorate-General for Energy

WORKSHOP ON
OPEN MARKETPLACES TO SPUR INNOVATIVE ENERGY SERVICES
JOINTLY ORGANISED BETWEEN DG ENER AND DG CONNECT AND THE ALLIANCE AIOTI

22 October 2018
ENTSO-E Offices, Avenue de Cortenbergh 100 1000 Brussels

Digital technologies have proven instrumental in enabling innovations across all sectors of the economy. As emphasised by the alliance AIOTI (AIOTI.eu) the combination of open Internet of Things and Blockchains with new data-driven business models will create opportunities for data marketplaces.
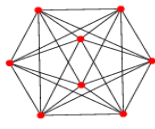
In the energy sector, digitisation is helping keep the transmission grid stable by balancing reserves from intermittent sources like wind and solar. At the micro level, connecting objects through the Internet of Things (IoT) makes every electric device a contributor to the energy system by bundling distributed energy resources into larger ecosystems. New technologies like distributed ledger technology (DLT) or blockchains will enable new possibilities for storing and sharing data. It will allow for trading flexibility at the edge and spur the emergence of open marketplaces that open up the data silos across energy, home, comfort, security and related domains, that currently keep data limited to the control of a few entities and prevent proliferation of community-centered services (P2P) and seamless transactions using blockchains and alike.

The European Commission, namely DG CONNECT and DG ENER, organise this dedicated workshop jointly with the alliance AIOTI. The workshop will tackle opportunities for blockchain as a means to realise the energy transition, from smart energy services based on IoT for connected appliances, smart mobility, to P2P energy trading and smart utilities. It will discuss in particular the role of blockchains as an enabler for data marketplaces and trading of energy, demand response and flexibility services, and for (community-based) investments in renewables.

This event builds on the first seminar organised by the European Commission and blockchain and energy, on 21 March 2018 that presented a broad overview of possible and practical (test) applications of blockchain in energy.

Therefore, the seminar on 22 October will discuss firstly how distributed ledger technologies / blockchains can be supported by and are impacted by the broader application context. Secondly we will hear the view on the economic potential benefits and risks of blockchain in the energy sector from a few knowledgeable organisations. As third and last part of the workshop, we will discuss the potential in 2 key areas, based on the particular experiences, tests and trials, namely 1) flexibility (micro) services for grids and 2) community driven investments in renewables.

It is part of a series of IoT events related to data marketplaces. The workshop will take place on 22 October in Brussels.

		22 October 2018	

No.	Time	Description	Speaker
1	09.00	*Registration and coffee*	
2	09.10	Welcome and introduction	Laurent Schmitt, ENTSO-E Rolf Riemenschneider, DG CNECT/E4 Mark van Stiphout, DG ENER/C2 Kees van der Klauw, Natalie Samovich, AIOTI
3	09.20	**Technology Enablers for open energy marketplaces** • Douglas Miller, ENERGYWEB 10 min • Nuria de Lama, ATOS (P2P models) 10 min • Olaf-Gerd Gemein FIWARE (t.b.c.) 10 min • Christopher Pilling, Fujitsu 10 min Moderator: Rolf Riemenschneider, DG CONNECT	Presentations
4	10.30	*Coffee break*	
5	10.45	**Technology Enablers for open energy marketplaces** (continued) • Tom de Block, AIOTI blockchain task force, 10 min • Ovidiu Vermesan, Sintef 10 min • Jaikrishnan R Pillai, Bovlabs SAS 10 min • Wilfried Pimenta, IOTA 10 min Moderator: Rolf Riemenschneider, DG CONNECT	Presentations Panel discussion & discussion with the audience
6	11.25	**Market trends / studies, reviews for energy markets** • Sonia Dunlop, Solar Energy Europe 10 min • Alastair Marke, Blockchain Climate Institute 10 min • Neal Coady, Head of Technology Strategy, Centrica Connected Home 10 min Moderator: Jens Strüker, HS-Fresenius	Presentations
7	12.00	**Blockchain start-ups supported by KIC Innoenergy** • Guillaume Gillet, Innoenergy - KIC Energy 5 min • Power2U 5 min • Chlorophyll 5 min	Pitches of Award Winners of the WindEurope Hackathon, 25 – 27 September 2018, Hamburg
8	12.30 ÷ 13.30	*Networking Lunch*	

9	13.30	**Experience in practice: Blockchains adding flexibility to Grids** • Norela Constantinescu, ENTSO-E 10 min • Ariette Franke-Sluijk, TenneT 10 min • Delphine Strunski, EPEX SPOT 10 min • Michael Metzger, Siemens (Pebbles project) 10 min • Massimo Bertoncini, (eDREAM project) 10 min Moderator: Mikolaj Jasiak, DG ENER B3	Presentations
10	14.45	Panel discussants: all speakers of the previous session Moderator: Mikolaj Jasiak, DG ENER B3	Panel discussion & discussion with the audience
11	15:15	*Coffee break*	
12	15.30	**Experience in practice:** **Community-driven Application and Services** • Josh Roberts REScoop 10 min • Francois Sonnet , Solar Coin 10 min • Louis Shaffer EATON (mobility) 10 min • André Bryde Alnor, Energienet 10 min • Jelle Meersmans, Enervalis 10 min Projects: OSMOSE, FLEXIFICIENCY, VICINITY, ENTROPY Moderator: Ruud Kempener, DG ENER C1	Presentations
13	16.30	panel discussants: all speakers of the previous session Moderator: Ruud Kempener, DG ENER C1	Panel discussion & discussion with the audience
14	16:50	Wrap-up & closing	Rolf Riemenschneider, DG CNECT/E4 Mark van Stiphout, DG ENER/C2
15	17:00	End	

Additional information

Questions on Technology Enablers

What technologies drive, rule and lead the shaping of open energy marketplaces, especially what is the role of IoT for data collection and decision support? What role of DLT/blockchains to enable uptake of new services?

→   How do you see the transforming nature of the technologies?
→   What are the cross-sectorial, interoperable approaches for data sharing to foster the growth of a larger ecosystem?
→   Who is developing this technology and what are the barriers for the uptake?
→   What does it take to scale (e.g. in identity and access, security, semantics, standards)

Questions on Market Trends

→   How will digital technologies like IoT and/or blockchains impact the energy market?

→   Report on market design studies and European landscape? New endeavours and business cases?

Questions on 'Blockchains adding flexibility to grids

→   What are the most prominent challenges for grid operators to match demand-response?

→   What needs to be done for grid operators to enable trading of energy and engage with consumers and prosumers?

→   How could DLT/Blockchains facilitate integrating the micro level and provide a guarantee of origin?

→   Who will develop the technology needed, achieve interoperable to the grid and deploys the infrastructure needed?

Question on Community-driven Application & Services

→   What are the use cases that drive future energy services and investment in renewables, electrification, e-mobility, energy-efficient buildings etc?

→   Who are the actors, value networks and the role of SMEs and what level of cooperation needed to thrive for community-driven investments and services?

→   What does it take, and what is blocking to spur the emergence of open marketplaces that open data sharing across different sectors?

→   What should EC do? Recommendations for innovation strategy and policy-making