BestRES

Best practices and implementation of innovative business models for renewable energy aggregators

Minutes of the 1st Workshop on Business Models for Renewable Energy Aggregators

3E Building
Kalkkaai 6 / Quai à la Chaux 6

Brussels, 27th September 2016

October 2016
www.bestres.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 691689.

Acknowledgement

This document has been produced within the BestRES project "Best practices and implementation of innovative business models for Renewable Energy aggregatorS".

The logos of the partners cooperating in this project are shown below and information about them is available in this report and at the website: www.bestres.eu

This document has been written by WIP - Renewable Energies.

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List of abbreviations and acronyms

BM	Business Model
BRP	Balancing Responsibility Party
CHP	Combined Heat and Power
DR	Demand Response
DSM	Demand Side Management
DSO	Distribution System Operator
EA	Energy Aggregators
ESCO	Energy Service company
EV	Electric Vehicles
ICT	Information and Communication Technology
LCA	Life Cycle Analysis
TSO	Transmission System Operator
VPP	Virtual Power Plant
EC	European Commission
NRA	National Regulatory authorities

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Summary of the presentations

Introduction

European electricity markets were historically designed around centralized and mostly fossil fuel generation. The electricity market landscape is however changing because the growth in renewable energy is increasing the share of intermittent electricity and price volatility in the power system.

In this framework, the market integration of intermittent electricity from renewable energy sources cannot be achieved by single individual, commercial or domestic consumers since they would only have a limited impact. It is only through a coordinated steering of vast amounts and types of consumers and producers in a market that the use of distributed generation, demand side management and energy storage can be effective. Therefore, there is an important role for Renewable Energy Aggregators who act on behalf of consumers and producers.

The Workshop on Business Models for Renewable Energy Aggregators was held as part of the BestRES project on 27th September 2016 in Brussels (Belgium) at the 3E office in Kalkkaai 6 / Quai à la Chaux 6, Belgium.

The aim of the workshop was to present to stakeholders an overview of the existing business models for the aggregation of renewable energy sources identified by the consortium of BestRES project, the benefits from collaborating with aggregators, and the evaluation of regulatory, legal and technical barriers for deployment of the business models.

The workshop provided detailed information on energy services downstream developed by the aggregators for industrial, commercial or domestic customers whom own generation and storage units or can offer demand response. The workshop was also related to the values provided by aggregators to the market players upstream such as BRPs, DSOs, TSOs and energy suppliers to optimize their portfolio and for balancing and congestion management.

The session “Introduction” was moderated by Silvia Caneva from WIP-Renewable Energies.

Overview on the BestRES project (WIP, Silvia Caneva)

Silvia Caneva (WIP) provided the participants with an overview of the BestRES project. The BestRES project aims to investigate the current barriers and to improve the role of Energy Aggregators (EA) in future electricity market designs. The BestRES Consortium will formulate Business Models (BMs), develop tools to facilitate their adoption, quantify the potential benefits and formulate policy recommendations. The work has been structured for achieving the following objectives:

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- Investigate existing European aggregation BMs taking into account technical, market, environmental and social benefits and legal barriers preventing their implementation
- Improve BMs that are replicable in other countries in the EU considering market designs and with a focus on competiveness and LCA
- Implementation or virtually implementation of improved BMs with real data and monitoring in the following target countries: United Kingdom, Belgium, Germany, France, Austria, Italy, Cyprus, Spain and Portugal

The BestRES project will last three years. It entered into force on 1st March 2016 and will end until 28th February 2019.

The target group, the Renewable Energy Aggregators, has been directly involved in the BestRES project consortium as partners:

- **Good Energy**, renewable energies aggregator active in United Kingdom
- **Next Kraftwerke Belgium**, renewable energies aggregator active in Belgium
- **Oekostrom**, renewable energies aggregator active in Austria
- **RE-Pro**, renewable energies aggregator active in Italy and Cyprus
- **Next Kraftwerke Germany**, renewable energies aggregator active in Germany and France
- **Energias de Portugal EDP**, renewable energies aggregator active in Spain and Portugal

Figure 1 BestRES target countries

The innovative business models to be provided during the project will be based on on-going business models available in Europe and adapted to the future market design by research institutions and energy expert partners such as the **Energy Economic Group of the Technical University of Vienna (TUW-EEG)** and **3E**. The consortium also includes a legal expert, **SUER** (Stiftung

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Umweltenergierecht /Foundation for Environmental Energy Law), who will provide a relevant contribution to the development of National and European recommendations on the business models implementation.

The BestRES project is coordinated by **WIP – Renewable Energies**. The project communication and dissemination will be carried out by WIP with the support of **Youris**.

For the BestRES project an Advisory Board has been established. The Members confirmed until now are:

- EURELECTRIC (European Association of Electricity Industry)
- EDSO for Smart Grids (European Distributor System Operator´s Association for Smart Grids)
- EREF (European Renewable Energy Federation)
- EFET (European Federation of Energy Traders)
- SEDC (Smart Energy Demand Coalition)
- KIC InnoEnergy
- Solar Power Europe
- ENTSO-E (European Network of Transmission System Operators)
- CEDEC (European Federation of Local Energy Companies)
- Europex (Association of European Energy Exchanges)

This workshop focused on the first stage of the BestRES project related to the investigation of existing European business models for the aggregation of renewable energy sources with the aim of gain a deep understanding of their technical, market, environmental and social benefits and legal barriers preventing their implementation. The next workshops to be held in the upcoming months will be:

- 2nd European workshop on improved business models for RES Aggregation (End 2017)
- 3rd European workshop on the implementation of the improved business models for RES Aggregation (End 2018 / Beginning 2019)
- 4th and final European workshop on legal and regulatory recommendations for the uptake of the existing market barriers (February 2019)

Aggregator business models & benefits of RES aggregation (3E Ruben Verhaegen)

Ruben Verhaegen (3E) provided the participants with an overview of the first results achieved until now in the project and deeply detailed in the BestRES reports:

- Existing business models for RE aggregators
- Technical, market, environmental and social benefits of aggregation BMs within the consortium

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The aim of the two reports is to define and classify current Business Models (BM) and determine technical, market, environmental and social benefits.

First a definition of aggregation and aggregator is needed to ensure a common understanding of one of key figures involved in the BestRES project.

Aggregation is defined as: "a coordinated steering of vast amounts and types of consumers and producers"

Aggregators are defined as: "legal entities that aggregate the load or generation of various demand and/or generation/production units and aim at optimizing energy supply and consumption either technically or economically"

Questionnaires have been developed to conduct interviews with aggregators partners of the consortium and outside the consortium in order to better to obtain an overview of the main existing BMs models for RES aggregation in Europe

The following table shows the main Business Models for aggregation identified during the BestRES project.

Table 1 Main business models for aggregation

Business Model	Description
Combined aggregator – supplier	Supply and aggregation together
Independent aggregator who doesn't sell at own risk	The aggregator is a service provider without taking risks (service provider)
Independent aggregator who sells at own risk	The aggregator sells at own risk to potential buyers such as the TSO, the BRP and the wholesale electricity markets (delegated)
Prosumer as aggregator	Prosumer adopts the role of the aggregator himself

As a result of this preliminary research among variety of BMs, the role of combined Aggregator-Supplier and/or Independent aggregator who sells at own risk (independent delegated aggregator) is the most implemented within the BestRES consortium and across Europe, while independent aggregators (delegated aggregator and aggregator as service provider) also have a significant presence.

Figure 2 illustrates important aspects of aggregator business models such as the most relevant cost components and the way value is created, the type of service providers and expected evolutions.

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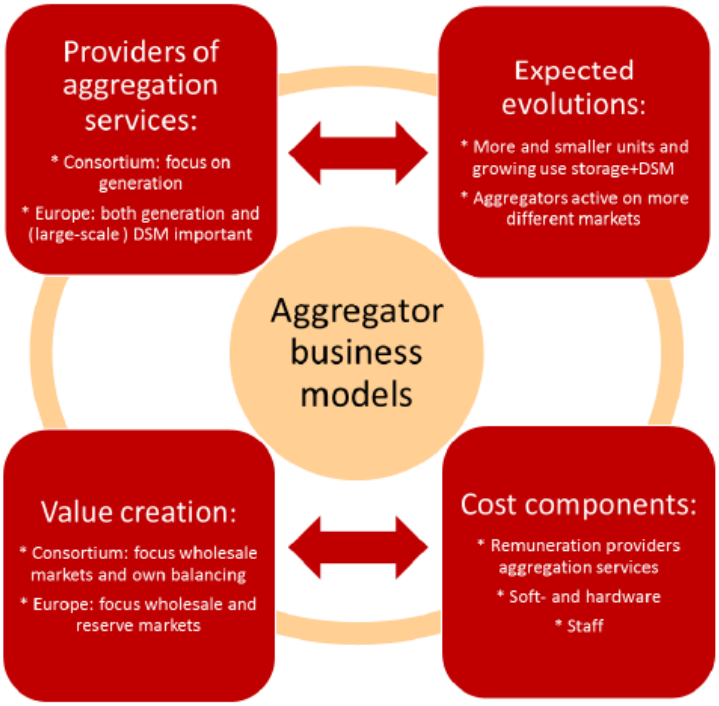

Figure 2 Important aspects of aggregator business models

According to the research, the general benefits of aggregation can be found in lower energy cost, reduced emissions, broader deployment of technologies and important increased participation of generation units. The latter cases are already visible in several countries with markets that are openings up as Germany and UK.

The potential market benefits can be structured in:

- Benefits for aggregator based on optimization of their portfolio and access to market with decentralized units
- Benefits for user of aggregation services based on lower prices on control reserves and wholesale markets and lower balancing cost
- Benefits for providers of aggregation services includes increased revenues and a reduced energy bill

The technical and social benefits identified for aggregation includes:

- Use for frequency control
- Congestion management
- Better understanding for prosumers of energy bills and market
- Deployment of new models to increase awareness with climate issues

Barriers for RES aggregation (SUER, Fabian Pause)

A high number of different types of barriers for RES aggregation has been defined by Fabian Pause (SUER) in the BestRES report “Technical, legal and regulatory barriers for optimal deployment and operations of current business models”.

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Figure 3 illustrates that main barriers identified in the BestRES report "Technical, legal and regulatory barriers for optimal deployment and operations of current business models" are legal and regulatory ones.

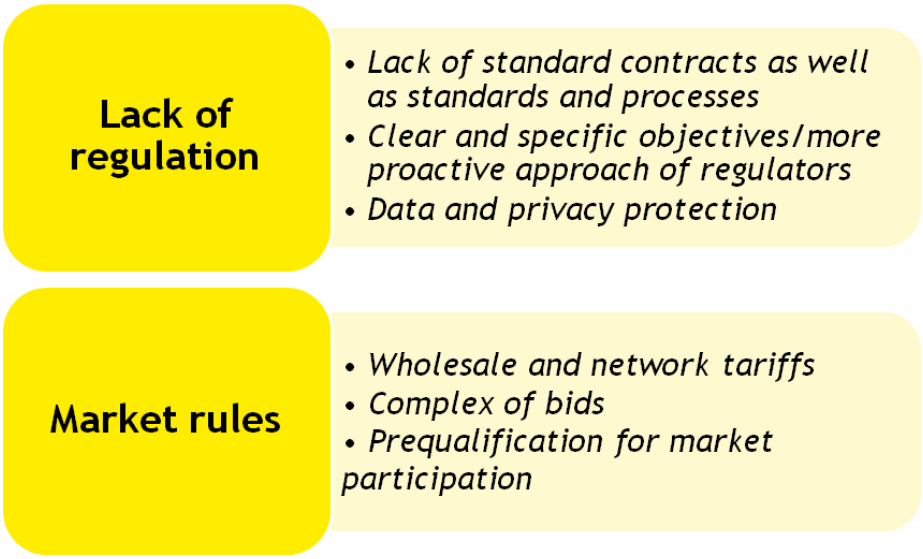

Figure 3 Main barriers

Technical barriers have also been identified and can be summarized as follows:

- Missing smart grid infrastructure
- Lack of forecast quality
- Shorter life cycle of storage technologies
- Need of standardization
- Lack of data provision/access

Session I. RES aggregation for balancing and congestion management of the energy system

The session I "RES aggregation for balancing and congestion management of the energy system" has been moderated by Manuel Sanchez from European Commission (EC).

Introduction from European Commission (EC), Manuel Sanchez

The European Commission Policy Framework works in five key pillars:

- Energy security , solidarity and trust
- Integrated European energy market
- Energy efficiency to moderate the demand
- Decarbonisation of the economy
- Research, innovation and competitiveness

In the middle of these pillars consumers found their location, they are key players in the energy market transition. European Commission (EC) work seeks to improve customer's participation in energy markets thanks to a proper engagement and incentives.

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EC recommendation is to give consumers the possibility to exploit the benefits of using their flexibility. In parallel National Regulatory Authorities (NRAs) needs to deploy innovative framework to ensure further consumer protection.

Participants in the European Smart Grids Task Force[1] have suggested that Members States should adapt market rules to recognize the role of aggregators and suppliers. Moreover, they have also mapped possible relations between market players, as it is shown in Figure 4.

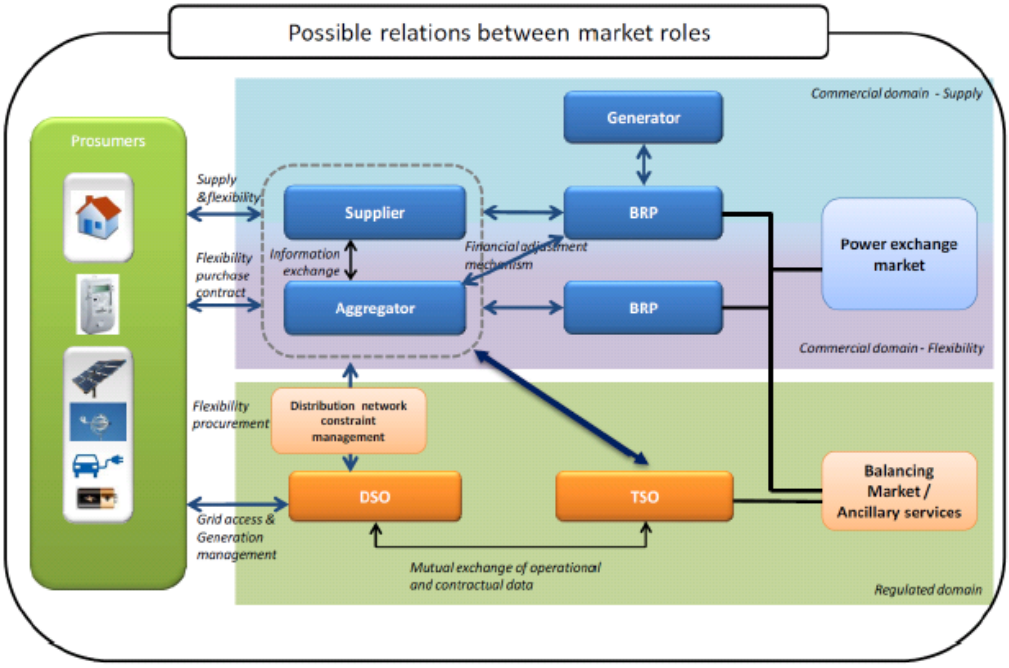

Figure 4 Possible relations between market roles

DSOs have a central role when solving local issues. DSOs should be able to use flexibility services where this provides a benefit to the network and consumers. A proper regulation should clarify the role of DSOs and therefore enhance competitive markets.

TSOs role should be a facilitator between market participants providing communication and coordination services. In this context through access to flexibility services and exchange of relevant data, TSOs and DSOs shall further collaborate to improve the network efficiency.

In view of this potential situation, EC and National Regulatory Authorities (NRAs) are supporting a successful deployment of demand side flexibility. EC and NRAs will continue ensure consumer protection requirements and their compatibility with the technical requirements. They are facilitating the collaboration between TSOs and DSOs to further improve network efficiency, and working to clarify the role of market participants (aggregators, BRPs, suppliers) and work with them to adapt market rules.

[1] https://ec.europa.eu/energy/en/topics/markets-and-consumers/smart-grids-and-meters/smart-grids-task-force

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A level playing field for RES aggregation (EURELECTRIC, Marion Labatut)

EURELECTRIC represents the EU electricity industry. Decarbonisation and decentralization are the key challenges of the electricity system and all assets will have a role to play: energy storage, decentralize generation, flexible demand response and electric vehicles Aggregation of RES, demand response and other flexibility resources will have a relevant part to play in wholesale market and retail market, offering new services to customers and new business opportunities to market players.

EURELECTRIC calls for a robust, transparent market design to clarify roles of each market participant and therefore also for the aggregators. This framework should ensure:

- Same market rules as other markets players
- Balance responsibility
- Full competition in all markets for RES/DR aggregators
- Integrated energy markets
- Automated processes, standardized contract and allocations that can be objectified in order to be ready for large-scale implementation

Marion Labatut (EURELECTRIC) mentioned that an aggregator can act as third party participant/aggregator (TPA) contracting directly with consumers. Due to an unspecific regulation, TPAs are facing unclear roles and responsibilities which have an impact on other actors causing undue imbalances. In order to address this issue EURELECTRIC recommends:

- Balancing responsibilities with the same rights and obligations as all other market participants
- TSO should take measures to protect a supplier from the normal consequences of any imbalance resulting from consumer's demand reduction
- Clear information channels and appropriate measurement tools to clearly quantify the volume of energy shifted by the consumer and re-routed by the third party aggregator
- The supplier should be remunerated by the third party aggregator for the sourced energy in a market- based way

Distribution System, an opportunity for aggregators (ORES, Dider Halkin)

ORES provided the participants with an overview of their activities. ORES is active in Wallonie, Belgium, as distribution grid operator (DGO) and as distribution system operator (DSO) offering meter operator and market facilitator services.

Dider Halkin (ORES) provided the participations with an overview about evolution of their portfolio from the current situation until 2030.

In 2016, ORES represents 90.000 prosumers, where Electric Vehicle (EV) and Heat Pump (HP) load are neglected. ORES highlighted that a prosumer generating electricity with PV system has yearly energy consumption about

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zero. This is due to the fact that the headcounter turns back during sunny hours and forward during consumption hours. ORES defines the following recommendations in order to give transparency on solar production:

- DSO should include the real PV power in his allocation processes (Fig. 5)
- Enhance collaboration between DSO and TSO because in order to give a complete service to the market (from prevision to settlement)

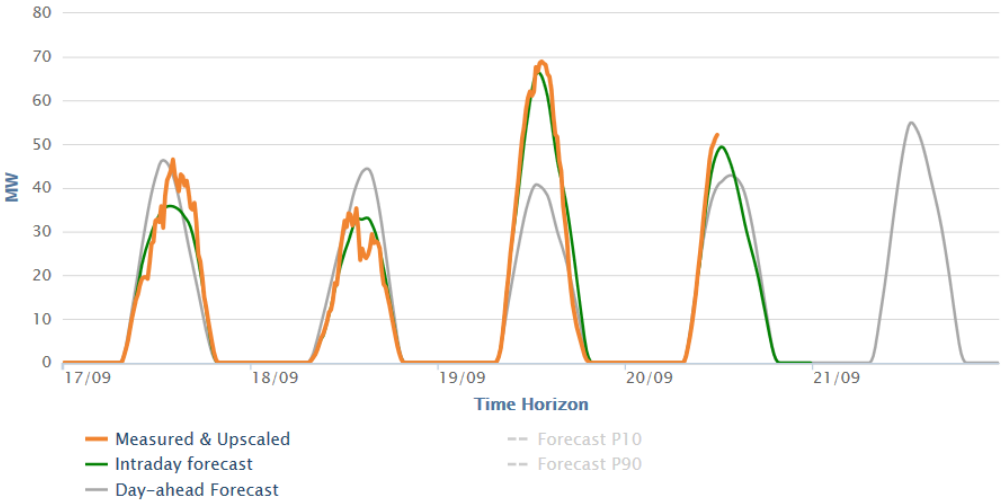

Figure 5 PV Power measured and forecast

The forecasts for 2030 foresee:

- 270.000 prosumers
- EVs between 100.000 and 300.000
- HPs between 80.000 and 160.000

This means that the situation at the distribution level will move from the load profile shown in Figure 6 in 2016 to the load profile shown in Figure 7 in 2030.

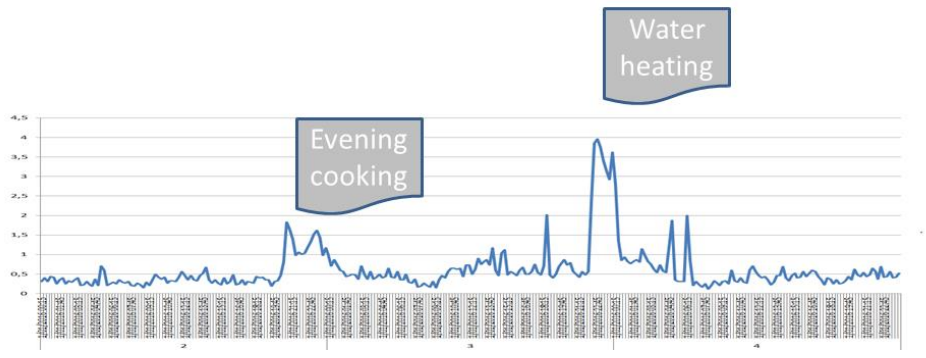

Figure 6 Typical individual load profile without PV, EV and HP

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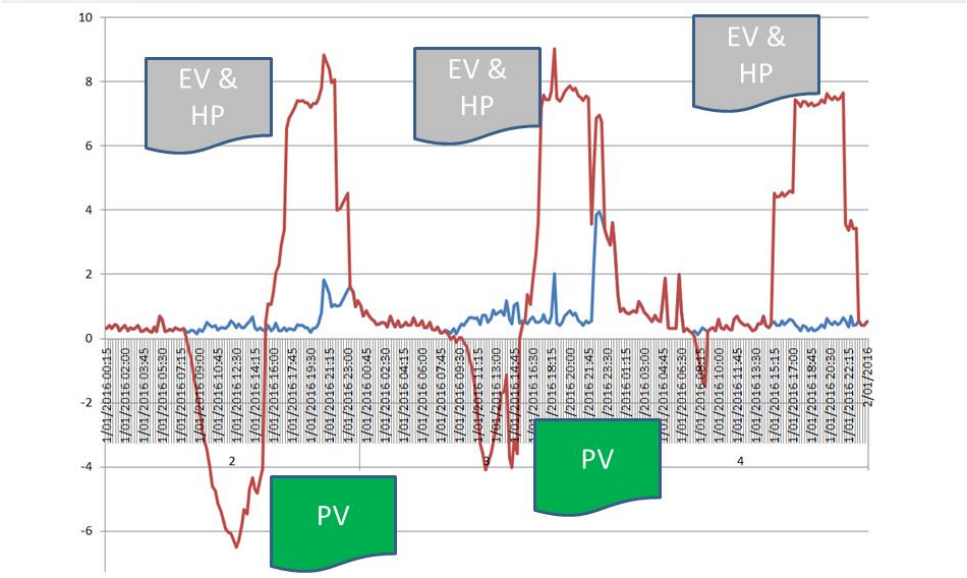

Figure 7 Typical individual load profile with PV, EV and HP

Figure 8 shows the impacts at system and network level in 2030 with prosumers with individual load profile defined in Figure 7.

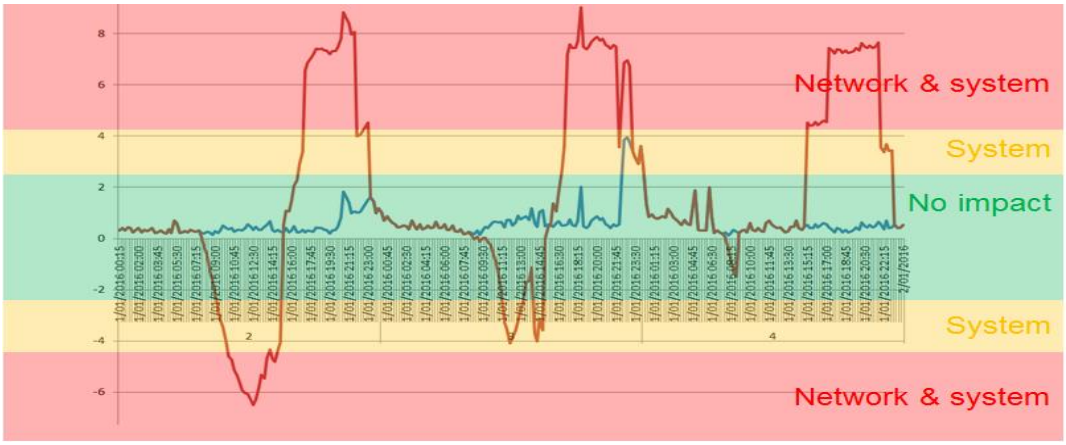

Figure 8 Impacts at system and network level

As a main consequence, ORES predicts an increase of ~ +10% in the grid bill of all the consumers due to the increase of the peaks at network and system level corresponding to the interface between TSO and DSO.

In order to minimize the peaks Dider Halkin (ORES) recommended to equip customers with smart meters and to incentivize tariffs in order to avoid most of these synchronous peaks. He highlighted that innovative technologies can help the customer to avoid these peaks. Aggregator or supplier that uses those technologies could valorise the “not used flexibility” by selling it in the electricity system.

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Energy services for balancing and congestion management of the energy system (Next Kraftwerke Belgium, Paul Kreutzkamp)

Next Kraftwerke operates large Virtual Power plants (VPPS) and is certified electricity trader in different markets. The concept of the virtual power plant is based on the idea to couple small and decentralized generation to make them work together as a large power plant.

In this context, the role of Next Kraftwerke as aggregator seeks to give the market access to flexibility and enhance of flexibility use at small and medium sized clients as shown in Figure 9.

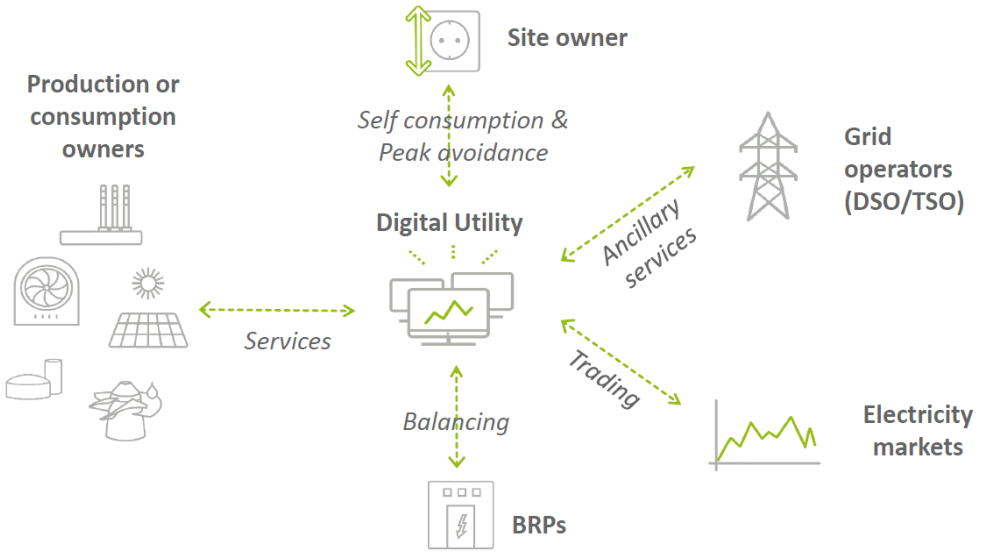

Figure 9 Services provided by an aggregator

Paul Kreutzkamp identified some benefits to be highlighted since aggregation was allowed in Germany (Figure 10 and Figure 11).

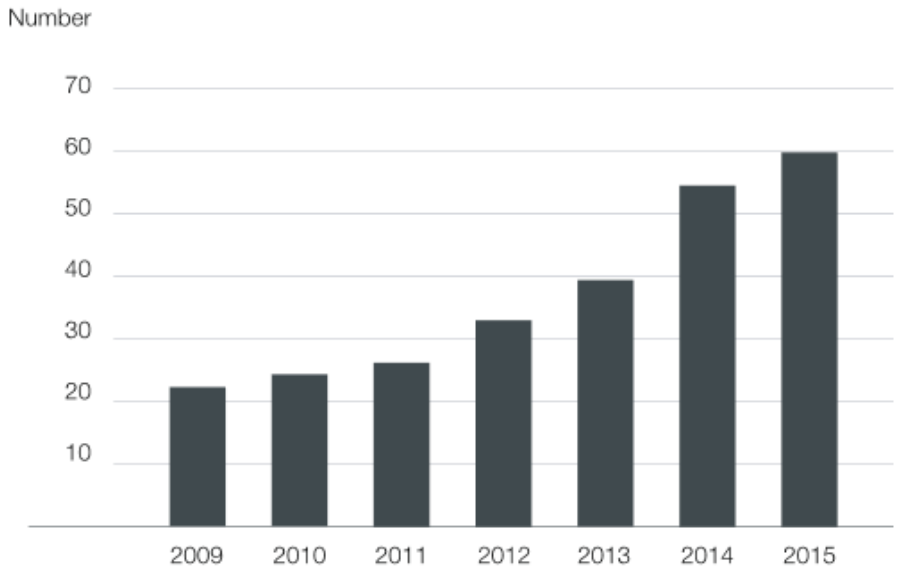

Figure 10 Number of suppliers of balancing capacity in Germany

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Since aggregation was allowed the number of providers for reserve power in Germany has increased by a factor 3.

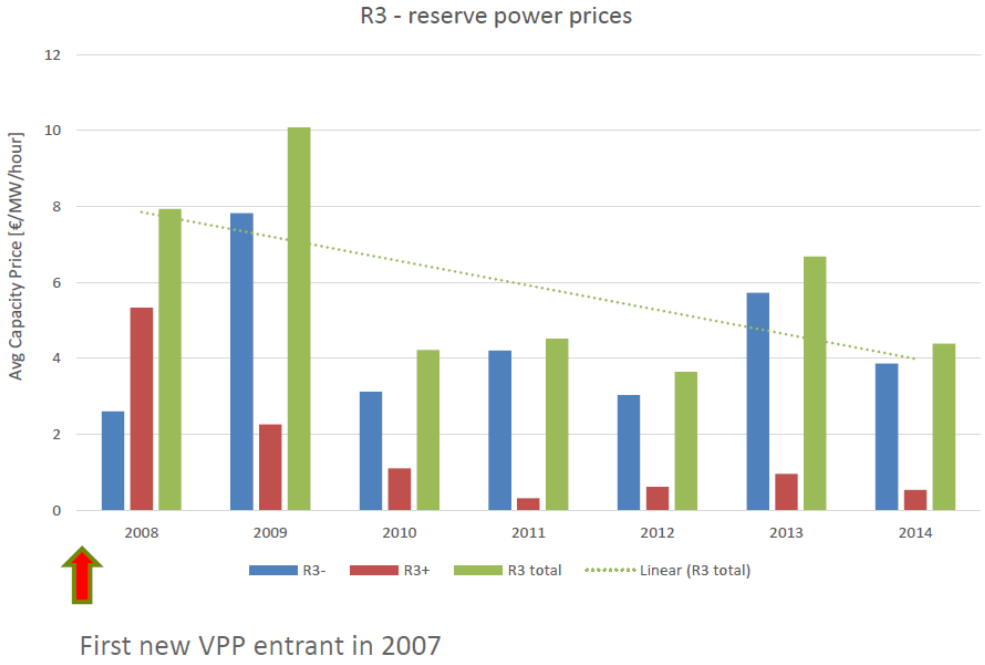

Figure 11 average capacity prices for the reserve power

Since the first new VPP entered into force in 2007 in Germany the average capacity price for the reserve power, Linear (R3 Total) in the graph, has decreased from 8 €/MW/hour in 2008 to 4 €/MW/hour in 2014.

Session II.RES aggregators as providers of flexible and competitive electricity supply

Session II "RES aggregators as providers of flexible and competitive electricity supply" was moderated by Sebastian Mortier from the Innovation and Networks Executive Agency (INEA).

How to facilitate engagement of domestic consumers in the electricity market (BEUC, Jörg Mühlenhoff)

BEUC represents the European Consumers Association. BEUC investigates EU decisions and developments likely to affect consumers, with a special focus on five areas identified as priorities by BEUC members: Financial Services, Food, Digital Rights, Consumer Rights & Enforcement and Sustainability.

Jörg Mühlenhoff (BEUC) highlighted that the role of prosumer (either collectively or individually) is becoming more and more important in the latest years (Figure 12) but an appropriate legal framework has not been established to protect them against current rules for wholesale markets and retail markets.

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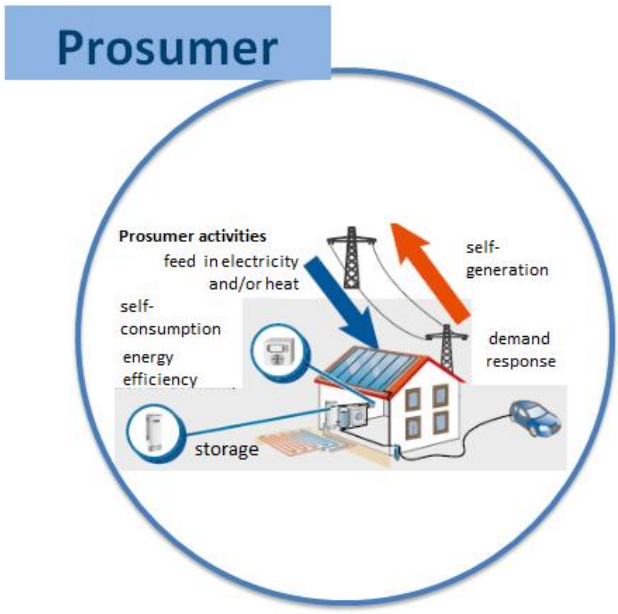

Figure 12 Prosumer activities

Jörg Mühlenhoff (BEUC) mentioned that further protection is needed in order to protect new prosumer rights and provided the participants with recommendations to be implemented:

- Fair access to markets (right to self-generate, priority grid access & dispatch, right to participate in DSR)
- Free choice for individual or collective market participation
- Fair & transparent network tariffs reflecting real grid use
- Equitable access to support schemes
- Prohibition of retroactive changes

Jörg Mühlenhoff (BEUC) concluded his presentation by mentioning that prosumers as self-generators should be further supported by a dedicated long-term strategy and priority grid access and dispatch. Fair remuneration has also to be implemented and has to allow tenants to access solar self-consumption.

The needs of industrial electricity consumers (Aurubis & IFIEC, Mukund Bhagwat)

Mukund Bhagwat (Aurubis & IFIEC) provided the participants with a presentation on the needs of industrial electricity consumers.

As international federation for industrial customers, IFIEC represents the interests of industrial energy users in Europe for whom energy is a significant component of production costs and a key factor of competitiveness in their activities in both Europe and throughout the world. Aurubis is the leading integrated copper group and the world's largest copper recycler.

Mukund Bhagwat (IFIEC) highlighted that industry should be looking forward to engage itself and, when it has the capacity, to react flexibly to the market directly or through intermediaries in order to extend renewable electricity and

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demand aggregation, bring down the electricity system cost and help Industry to remain sustainable and competitive.

Mukund Bhagwat (IFIEC) provided the participants with the key actions to balance demand flexibility opportunities in line with the company objectives required by sustainability, energy efficiency and emissions efficiency (EU-Emission Trading Scheme). Main ones are listed below:

- Encouragement for demand-flexibility should be financially attractive to overcome the possible loss of objectives towards sustainability
- Not all industrial processes can respond to market or TSO signals close to real-time
- Modulating demand in a flexible manner will be possible only for a part of the total plant consumption because this can result in a loss of energy efficiency as well as increasing CO_2 emissions
- Demand flexibility should be voluntary because unpredicted shut down's result in huge financial losses and safety incidents.
- There should be encouragement for demand-flexibility while overcoming penalties related to emission efficiency decrease

Mukund Bhagwat (IFIEC) concluded his presentation by highlighting that demand flexibility improvements or renewable energies injection requires high investments and are not economical with current technologies at current electricity market conditions. Demand flexibility and renewable energies injection must be put in perspective with competitiveness, materials extraction efficiency and sustainability.

Providing flexible and competitive electricity supply to consumer (oekostrom AG, Maximilian Kloess)

Maximilian Kloess (Oekostrom AG) provided the participants with an overview of the activities of Oekostrom AG in Austria. Some of the milestones achieved until now are:

- Provider of 100% renewable power to end consumers (2000)
- First to buy excess feed-in from PV producers (2003)
- Pioneer in wind generation in Austria
- Market introduction of Plug-in PV Module (2015)

Maximilian Kloess (Oekostrom AG) focused his presentation on the approach adopted by Oekostrom AG for flexibilizing renewable supply (hydro, PV and wind generation) and demand (large and small consumers).

He highlighted that nowadays the challenges for the renewable supply integration are related to the seasonal and daily fluctuations, forecasting error and spot price interaction ("merit-order-effect").

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In order to flexibilize wind generation he mentioned that:

- Wind parks have to be linked to a control center
- Live data is used to correct forecasting errors on the intraday market
- To reduce balancing costs wind feed-in can be curtailed
- Curtailment is based on the short-term forecasting error and the balancing price forecast

For flexibilizing hydro power generation he highlighted that:

- Hydro power plants have to be linked to a control center
- Live data is used for forecasting
- To reduce balancing costs in the balancing group hydro feed-in can be curtailed
- Pooling should be used to offer control reserve

Max Kloess (oekostrom AG) added that the flexibilisation of renewable energies supply is economically feasible and largely applied.

On the other hand, in terms of demand flexibility, Max Kloess (oekostrom AG) highlighted that flexibilisation of demand is economically feasible and applied only for large consumers with shiftable loads (heating & cooling-processes) and infeasible for small consumers. This is due to the fact that small consumers have no economic incentive to shift loads. He mentioned that no real time data is available due to the lack of smart meters. Only few smart meters have been rolled out so far in Austria.

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Panel discussion on the benefits of energy storage, demand response and RES aggregation

The panel discussion was moderated by Frauke Thies, Executive Director of Smart Energy Demand Coalition.

The following panelists took part to the discussion:
- Manuel Sánchez, DG Energy, EC
- Marion Labatut, Eurelectric
- Didier Halkin, ORES
- Jörg Mühlenhoff, BEUC
- Mukund Bhagwat, Aurubis & IFIEC

Several statements were mentioned by the moderators during the panel discussion in order to provide a starting point for the discussion.

"Renewables support schemes hamper the development of aggregation models"

The panelists agreed that the market rules have to be redesigned. A transparent and robust framework have to be established for a proper deployment of aggregation business models able to offer to the customers new business opportunities of using flexibility services. As already mentioned, some recommendations to remark should be:

- Same market rules as other markets players
- Balance responsibility
- Full competition in all markets for RES/DR aggregators
- Integrated energy markets
- Automated processes, clear contracts and allocations that can be objectified in order to be ready for large-scale implementation

"In a smart power system, consumers and generators will receive price and frequency signals in real-time, making aggregation obsolete"

This question triggered the discussion towards smart-metering. In this context some industrial stakeholders expressed their concern about the use and the concept of smart metering. On one hand stakeholders remarks that smart meters should work as real time data communicator for aggregators. On the other hand it has been clarified that a smart metering should work on both directions allowing an accurate billing through the communication between the electricity meters recording the actual consumption and the monitoring utility. They may also facilitate the provision of additional services to consumers.

EU aims to replace at least 80% of electricity meters with smart meters by 2020 in these member states who decided to roll-out these systems.

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Smart metering and smart grids rollout can reduce emissions in the EU by up to 9% and annual household energy consumption by similar amounts. To measure cost effectiveness, EU countries conducted cost-benefit analyses based on guidelines provided by the European Commission [Benchmarking smart metering deployment in the EU-27 with a focus on electricity [COM(2014)356].

"The aggregator business model will naturally evolve to include all: renewables, demand response and storage"

In the context of this question panelists expressed the idea that the role of DSOs as aggregator is not well based and it shall not be considerate among the aggregation BM.

It has been highlighted that DSOs will take a significant role when solving local issues, but clarifications and a proper framework are needed. It is a task from EC, member states and National Regulatory Authorities (NRA) to ensure a successful deployment of demand side flexibility.

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Annex I - Agenda of the workshop

12:30 - 13:30	**Arrival and networking lunch**	
Introduction ***Chair: Ingrid Weiss, Head of policies and strategies unit, WIP - Renewable Energies***		
13:30 - 13:40	**Overview on the BestRES project**	Silvia Caneva, Senior Project Manager, WIP-Renewable Energies
13:40 - 14:00	**Aggregator business models & benefits of RES aggregation**	Ruben Verhaegen, Expert Grids & Power Markets, 3E
14:00 - 14:10	**Barriers for RES aggregation**	Fabian Pause, Legal Expert, SUER
Session I **RES aggregation for balancing and congestion management of the energy system** ***Chair: Manuel Sánchez, Team Leader Smart Grids, Directorate General for Energy, European Commission***		
14:10 - 14:20	**Commission's introduction and remarks for the session**	Manuel Sánchez, Team Leader Smart Grids, DG Energy, EC
14:20 - 14:40	**The point of view of the electricity industry** **Distribution Systems, an opportunity for Aggregators**	Marion Labatut, Wholesale & Retail Market issues, EURELECTRIC
14:40 - 15:00	**Energy services for balancing and congestion management of the energy system**	Didier Halkin, Settlement Processes & Balancing Products, ORES
15:00 - 15:20		Paul Kreutzkamp, Managing Director, Next Kraftwerke Belgium
15:20 - 15:30	**Q&A**	
15:30- 15:50	**Coffee break**	
Session II **RES aggregators as providers of flexible and competitive electricity supply** ***Chair: Sebastien Mortier, Innovation and Networks Executive Agency (INEA), European Commission***		
15:50 - 16:10	**How to facilitate engagement of domestic consumers in the electricity market?**	Jörg Mühlenhoff, Project Coordinator on Renewable Energy, BEUC
16:10 - 16:30	**The needs of the industrial electricity consumers**	Mukund Bhagwat, Corporate Energy & Climate Affairs, Aurubis and IFIEC
16:30 - 16:50	**Providing flexible and competitive electricity supply to consumers**	Maximilian Kloess, Expert Power Economics & Trading, oekostrom AG
16:50 - 17:00	**Q&A**	
Panel discussion on the benefits of energy storage, demand response and RES aggregation		
17:00 - 17:30	**Panelists:** - Manuel Sánchez, DG Energy, EC - Marion Labatut, Eurelectric - Didier Halkin, ORES - Sebastien Mortier, INEA, EC - Jörg Mühlenhoff, BEUC - Mukund Bhagwat, Aurubis & IFIEC	*Discussion moderated by Frauke Thies, Executive Director of Smart Energy Demand Coalition - SEDC*
17:30 - 17:40	**Conclusion and adjourn** ***Technical University of Vienna***	

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Annex II Technical references

Project Acronym	BestRES
Project Title	Best practices and implementation of innovative business models for Renewable Energy aggregatorS
Project Coordinator	Silvia Caneva WIP – Renewable Energies silvia.caneva@wip-munich.de
Project Duration	1st March 2016 – 28th February 2019

Deliverable No.	D2.4
Dissemination level*	PU
Work Package	WP 2 - WP Adequacy Analysis of current business models
Task	T2.4 – Minutes of the expert workshop
Lead beneficiary	1 (WIP)
Contributing beneficiary/ies	/
Due date of deliverable	31st August 2016
Actual submission date	8th November 2016

* PU = Public
PP = Restricted to other programme participants (including the Commission Services)
RE = Restricted to a group specified by the consortium (including the Commission Services)
CO = Confidential, only for members of the consortium (including the Commission Services)

v	Date	Beneficiary	Author
1.0	19.10.2016	WIP	Pablo Alonso
2.0	24.10.2016	3E	Ruben Verhaegen
3.0	25.10.2016	WIP	Pablo Alonso
4.0	26.10.2016	WIP	Silvia Caneva

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