



# ***MULTI-LAYER AGGREGATOR SOLUTIONS TO FACILITATE OPTIMUM DEMAND RESPONSE AND GRID FLEXIBILITY (SMART-MLA)***

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## **Second Meeting**

Time: 13 June 2019

Venue: Gustaf Dahlander Room, Teknikringen 31, KTH Royal Institute of Technology, Stockholm, Sweden

<https://www.kth.se/places/room/id/95b88c8c-ccd2-4412-97e6-d214d24e4552>

Host: Ming Xiao, KTH (Mobile: 0737898250)

### **1. Introduction and purpose**

The main objective of this project is to develop multi-layer aggregator solutions integrated into an informatics prototype with the aim of facilitating optimum demand response (DR)-based grid flexibility and contributing to 100% renewable source integration. At the final destination, all types of electricity consumers can have access to the energy markets and would be able to trade based on their flexibility.

On 30 November 2018, the kick-off meeting of this project has held. During the kick-off meeting, outline of the project are reviewed and partners of the project were introduced to each other. It was decided to prepare and sign a new version of consortium agreement until the second meeting. In addition, two online meetings were held to update the partners regarding the status and progress of SMART\_MLA project.

Based on the project plan, we are now in the 8<sup>th</sup> month of the project (out of 36) where tasks 1, 2, and 3 are ongoing. To discuss progresses and update the consortium members, we are intending to hold the second meeting of Smart\_MLA project. This meeting will be held at KTH Royal Institute of Technology on 13 June 2019 with the great support of Prof. Ming. The meeting agenda is presented in the following.



## 2. Agenda

09.00-09.30	Participants arrival and Welcome Coffee-Snack
09.30-10.30	<b>Objectives of meeting, summary of activities, and expected outcomes (WP1)</b> Presenter: Osman Bulent Tor (EPRA) Contributors: All
10.30-11.00	<b>Optimization algorithms design and development (Updates on WP2 - Task 2.a.1)</b> Presenter: Osman Bulent Tor & Saeed Teimourzadeh (EPRA) Contributors: All
11:00-11:15	Coffee break
11.15-12.15	<b>Optimization algorithms design and development (Updates on WP2 - Task 2.a.2 &amp; Task 2.a.3)</b> Presenter: Qiuwei Wu & Xiaolong Jin (DTU) Contributors: All
12.15-12.30	<b>Discussions on next steps of WP2</b> Contributors: All.
12.30-13.45	Lunch Break
13.45-14.45	<b>Monitoring and control (hardware, software, telecommunication, devices, standards) (Updates on WP3 - Task 3.b)</b> Presenter: Ming Xiao (KTH) Contributors: All
14.45-15.45	<b>Business model development (Updates on WP4)</b> Business plan - Presenter: Lasse Bernzen (USN) Data management plan - Presenter: Marius (USN) Contributors: All
15.45-16.00	Coffee Break
16.00-17.00	<b>Design and development cloud-based web-service application tool (Updates on WP3 - Task 3.a)</b> Presenter: Adela Bara & Simona Opera (BUES) - <b>Online</b> Contributors: All
17.00-18.00	<b>Targets, timeline, next steps, recommendations, next meetings</b> Moderator: Osman Bulent Tor (EPRA) Stakeholder workshop to be held in Norway - Presenter: Lasse Bernzen & Marius (USN) Discussion: Cross-partner collaboration strategy for publications Contributors: All.
18.00	<b>Closing</b>
19:30	<b>Group dinner (location to be determined)</b>



### 3. List of participants

First name	Last name	Institution	Country
Osman Bulent	Tor	EPRA	Turkey
Saeed	Teimourzadeh	EPRA	Turkey
Adela	Bara	BUES (online)	Romania
Simona Vasilica	Oprea	BUES (online)	Romania
Ionut	Taranu	Stimasoft (online)	Romania
Alparslan	Gürbak	AKEDAS DSO	Turkey
Ali Osman	Köksal	AKEDAS DSO	Turkey
Lasse	Berntzen	USN	Norway
Thomas	Brekke	USN	Norway
Marius	Rohde Johannessen	USN	Norway
Boban	Vesin	USN	Norway
Ming	Xiao	KTH	Sweden
Xiaolong	Jin	DTU	Denmark

### 4. Discussed items and decisions

- Brief introduction on participants was made to orient the new members.
- Outline, scope and current status of the project was reviewed by Dr. Osman Bulent Tor as the project manager.
- Discussion was made regarding the status of Inno-Energy and MET, the reason for resigning from the consortium, and the allocation of their task to the remaining participants.
- It was stated that more online meeting are in essence for keeping the project as update as possible.
- It was decided to prepare a template for acknowledging SMART\_MLA project in relevant papers.
- It was decided to make and share new email group due to participate of new members and announce the contact in the website.
- The community aggregator (layer 1 of Task 2) model and associated demo was presented by Dr. Saeed Teimourzadeh and the comments and feedbacks of participate was discussed.
- The Homer Energy tool was mentioned by the participants and it was decided to check the capability of Homer Energy to make sure that nothing is missed.
- Dr. Xiaolong Jin presented the outline of their study for layer 2 and 3 of Task 2.
- It was proposed to prepare a policy-oriented paper regarding the aggregator concept by collaboration of USN and EPRA.



- Prof. Xiao Ming presented the outline of their study regarding monitoring and control for hardware, software, telecommunication, devices, and standards.
- A discussion made on blockchain method and it was decided to analysis this concept more by USN.
- Dr. Marius Rohde Johannessen presented the data management plan (DMP) for SMART\_MLA project and it was decided to prepare a live document on the share folder so that all participants can fill out associated parts.
- Dr. Thomas Brekke and Prof. Lasse Berntzen presented the fundamentals and outline of their study on business model development.
- Dr. Boban Vesin presented the load forecast concept. It was decided that USN and BUES get in touch regarding load data.
- Dr. Simona Oprea and Dr. Adela Bara made online presentation regarding data framework and cloud-based web-service. It was emphasized that BUES needs feedback from other participants regarding the data attributes and constraints for the relational database since the data model is the base for the other models such as forecast, optimization, market trading, etc. So the input will be read from the database (not from data files) as stated in the project proposal.
- It was decided to make to make monthly regular teleconferences. The first one would be 22 July 2019 Istanbul Time 3 PM, the second one would be 26 August 2019 Istanbul Time 5 PM. The others would be decided later on. EPRA will share the link for call. In addition, some teleconferences between the decided ones would be made if needed.
- Next meetings for the consortium was planned: 20 September 2019 Antalya-Turkey, Workshop at Mid-April 2020 at Norway.

## 5. To do List

Task	Responsible Partner	Deadline
Making new mail group and sharing with consortium members	EPRA	Late June 2019.
Sharing the contact list provided by EPRA in the project website	Stima Soft	Late June 2019.
Sharing second meeting presentations files	All	Late June 2019.
Updating the shared file link and sharing it	EPRA	Late June 2019.
Investigating Homer Energy tool	EPRA & DTU	Next in person meeting



Bilateral contacting of EPRA and DTU regarding WP2 and optimization model	EPRA-DTU	Bilateral coordination by EPRA and DTU
Initiation of policy-oriented paper (title, short abstract, outline, contributors from the partners)	USN	End of July 2019
Prepare the first draft for acknowledging SMART_MLA project in relevant papers.	BUES	End of June 2019
More investigation on blockchain	USN	Next in person meeting
Sharing of Data Management Plan drafted by USN	EPRA	End of June 2019
Contributions to Data Management Plan on the shared folder	All	Living document
Update of the project website with second meeting materials	Stima Soft	Late June 2019.
Bilateral contacting of USN and BUES regarding load forecast issue.	USN-Boban & BUES	Bilateral coordination by BUES and USN
Data Table preparation for Task 2.1	EPRA	End of August 2019
Data Table preparation for Task 2.2 and 2.3	DTU	Will be discussed at online meeting on 22 July 2019.
Sending calendar invitation for regular telcos for blocking the dates: <u>22 July 2019 Istanbul Time 3 PM</u> , and <u>26 August 2019 Istanbul Time 5 PM</u> (Please check the time and confirm)	All-EPRA	Late June 2019.
Organization of the next in person meeting at 20 September 2019.	EPRA	End of August 2019