

Other Topics

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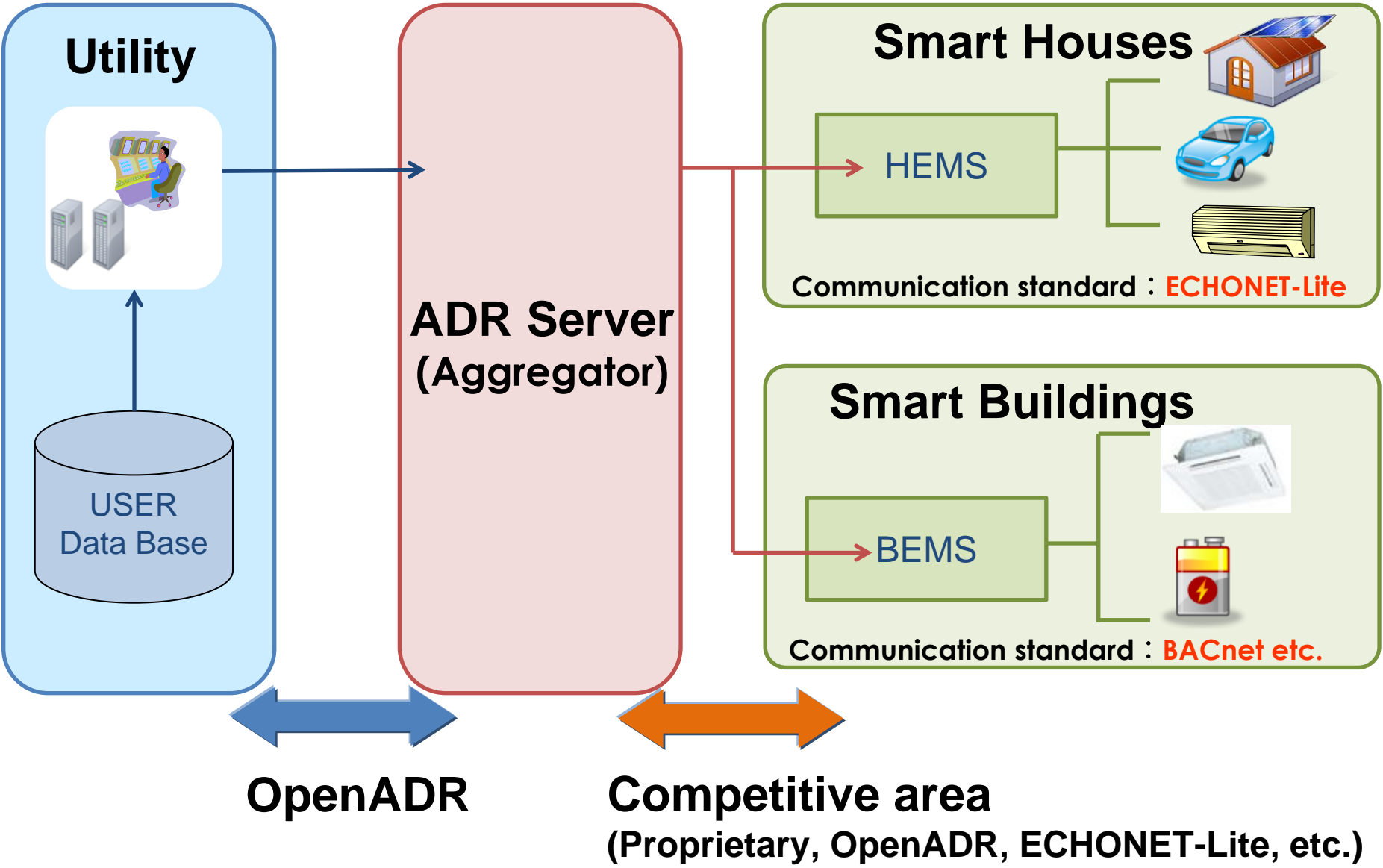
Energy Resource Aggregation Business Forum

&

Chief Director, ADR Japan



Standardization of Communication Interface for DR (2013-)



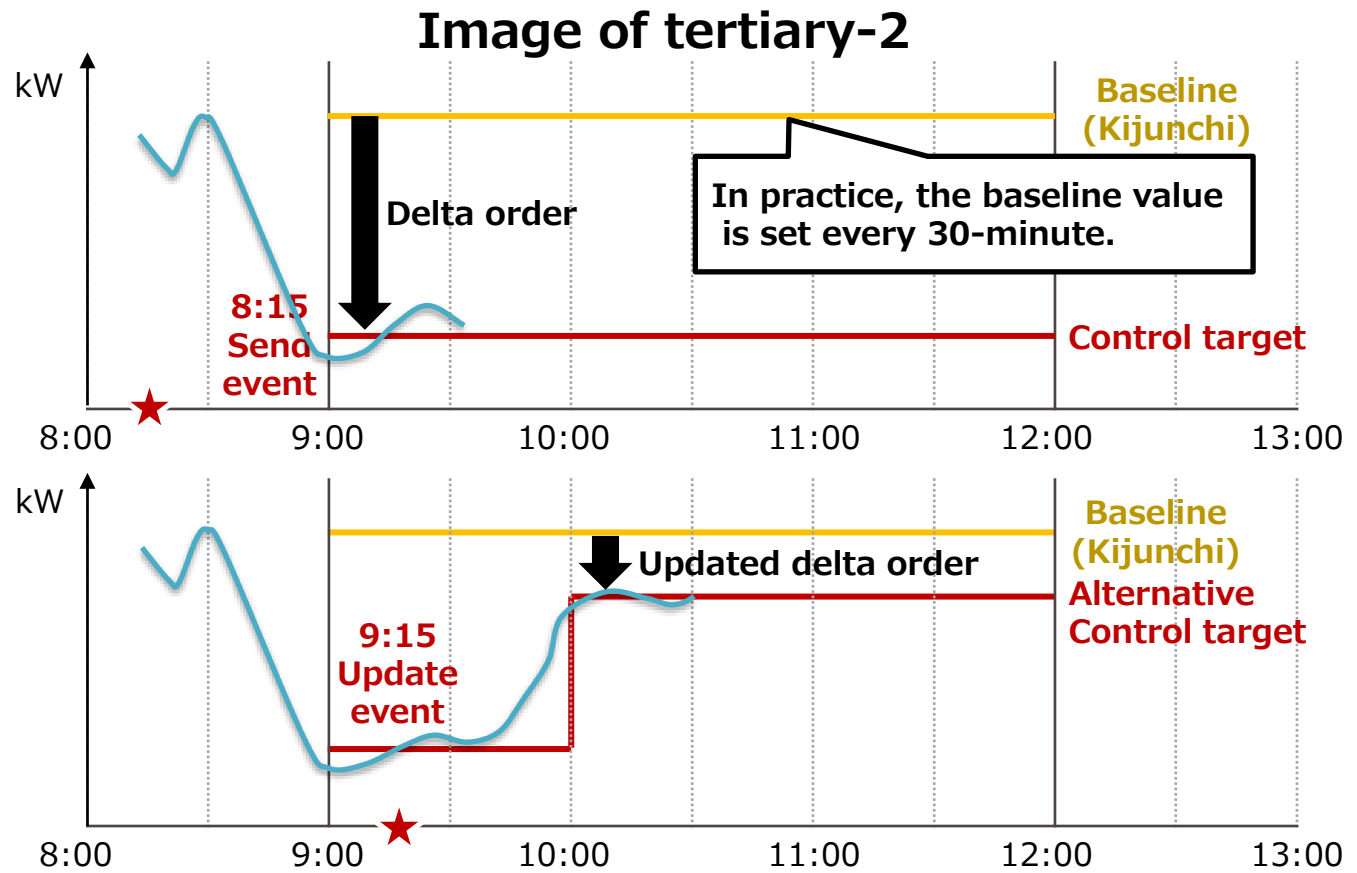
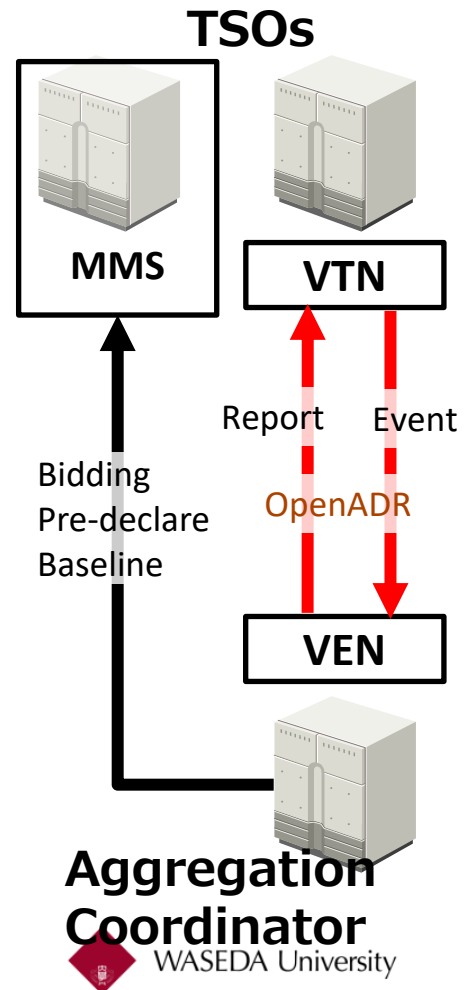
Categories and requirements in Japanese Balancing Market

	Primary (GF)	Secondary-1 (LFC)	Secondary-2 (EDC-H)	Tertiary (EDC-L)	Tertiary (Slow Res.)
Name*	FCR	S-FRR	FRR	RR	RR-FIT
Order/Control	—	Order/Control	Order/Control	Order/Control	Order
Comm. Line	—	Private NW, etc.	Private NW, etc.	Private NW, etc.	Dispatch system
Monitor	on line	on line	on line	on line	on line
Response	< 10 sec	< 5 min	< 5 min	< 15 min	< 45 min
Duration	> 5 min	> 30 min	> 30 min	3 hr	3 hr
Max. bidding	As much as possible	As much as possible	As much as possible	As much as possible	As much as possible
Min. bidding	5MW	5MW	5MW	5MW	1MW
Order period	autonomous	0.5~10sec	1~a few min	1~a few min	30 min
Monitor period	1~a few sec	1~5 sec	1~5 sec	1~5 sec	TBD
Bidding unit	1kW	1kW	1kW	1kW	1kW
Category	up / down	up / down	up / down	up / down	up / down



Operation in Balancing Market using OpenADR

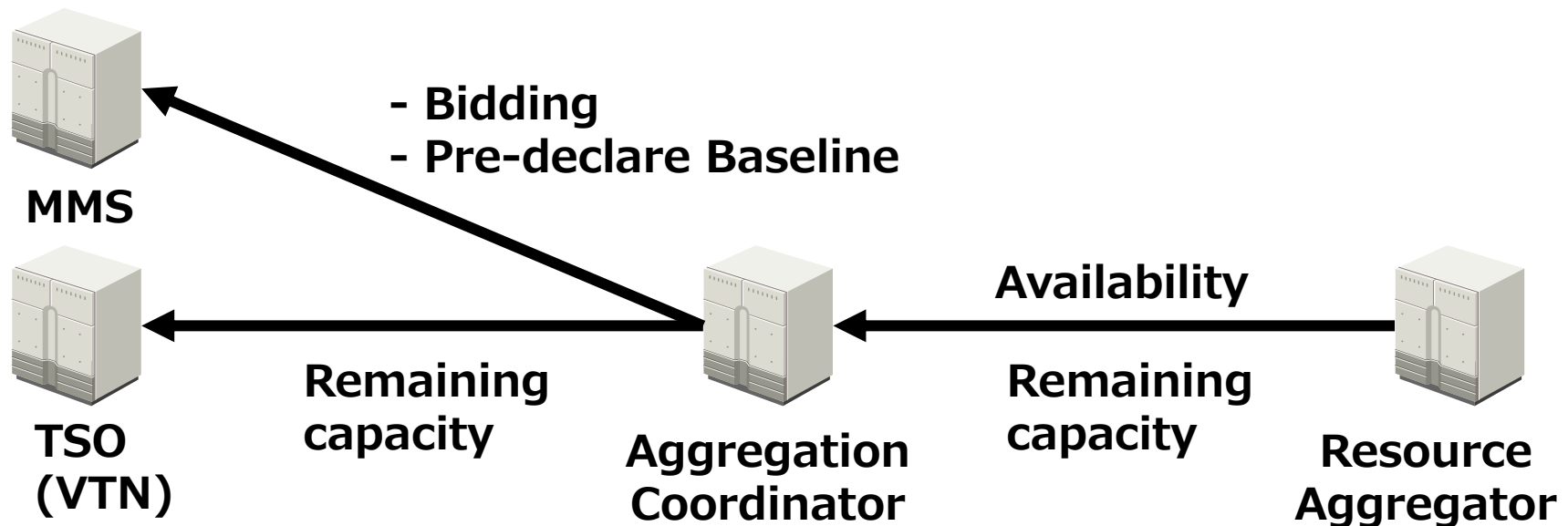
- ❑ BM/Tertiary-2 (RR-FIT) opened in April 2021
- ❑ Preparation for BM/Tertiary-1 (RR, starts in 2022)
- ❑ Baseline pre-declaration is reported to Market Management System.



Future Value Report Using OpenADR2.0b

- ❑ The baseline (future value) pre-declaration transmission is not utilizing OpenADR in BM/Tertiary-2.
- ❑ As future needs;
 - ✓ Reporting “remaining flexibility range” to TSO (other market products may use this in the future)
 - ✓ Reporting Aggregation of RA’s availability

We have obtained many opinions that we should organize how the future value report is implemented in OpenADR2.0b in Japan.



Education Program under Planning (Start Dec. 2021)

- **Area : Distributed Energy Management System**
 - ✓ World Energy Trend & Energy Policies
 - ✓ Necessity of Aggregation and Control of DERs
 - ✓ Architecture for aggregating DERs
 - ✓ Communication Standards

- **Target : Government Officials, Electrical Engineers, etc.**

- **Discussion**

- **Preliminary Trial in 2019**
 - ✓ Energy Trend & Energy Policies in your country
 - ✓ Distributed Energy Management : DR, VPP



תודה
Dankie Gracias
Спасибо شكراً
Merci Takk
Köszönjük Terima kasih
Grazie Dziękujemy Děkojame
Ďakujeme Vielen Dank Paldies
Kiitos Tänname teid 谢谢
Thank You Tak
感謝您 Obrigado Teşekkür Ederiz
Σας Ευχαριστούμ 감사합니다
Благодарим вас
Bedankt Děkujeme vám
ありがとうございます
Tack

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