



Deutsche Gesellschaft für Sonnenenergie e.V.
International Solar Energy Society, German Section

Selbstregelung ... und die Aktivitäten von IEC TC 69

Tomi Engel

ETG Fragerunde – 18.01.2022

Was ist "Selbstregelung"?





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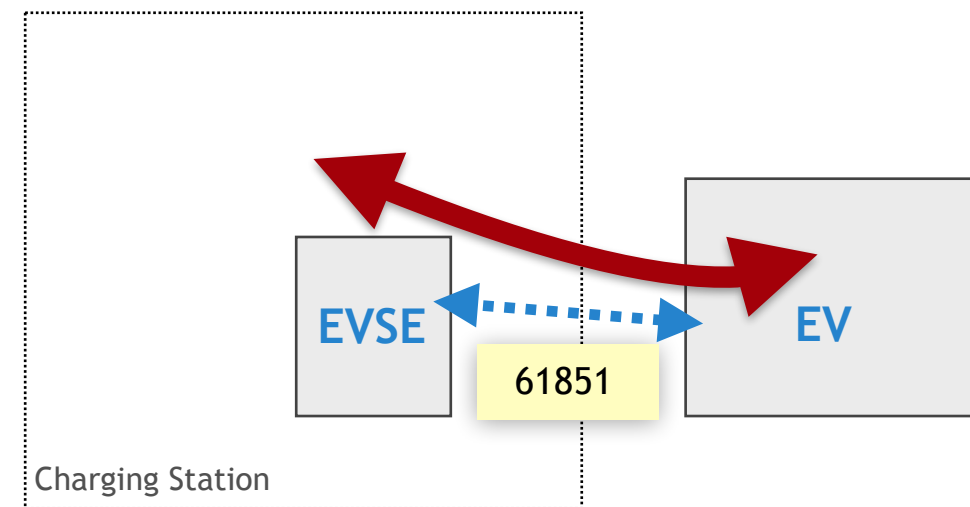


Hamsterkäufe verhindern ... in Zeiten von akutem Mangel



Aktivitäten von IEC TC 69 (Elektromobilität)

IEC 61851 ... Analoge Basis-Kommunikation und elektrische Sicherheit



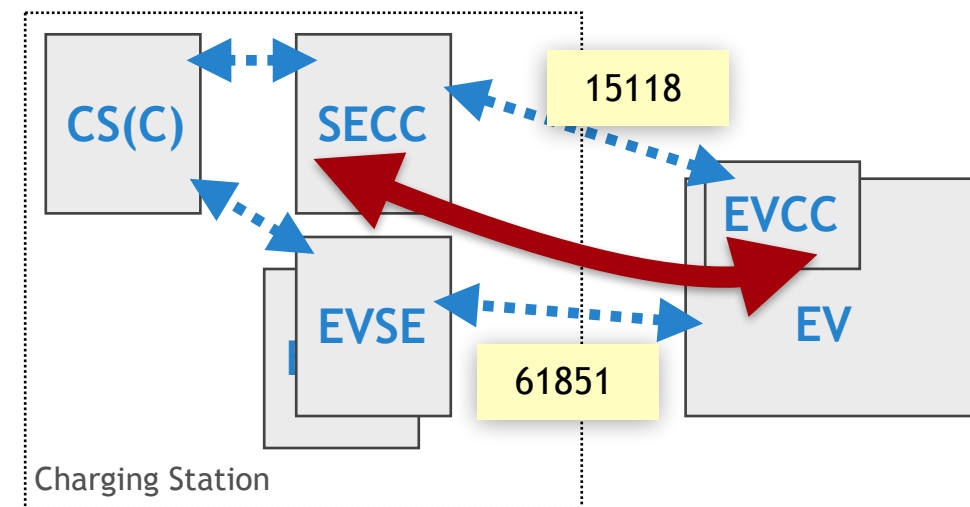


Aktivitäten von IEC TC 69 (Elektromobilität)

IEC 61851 ... Analoge Basis-Kommunikation und elektrische Sicherheit

ISO 15118 ... Digitale High-Level-Kommunikation ... u.a. mit:

- "Grid Forming" für Microgrids
- PV-Eigenstromoptimierung (z.B. via Dynamic Mode)



Responsible for:
- High Level EV Com.

JWG 1



2021 – Vehicle-2-Load goes Massenware



Ioniq 5 (2021)

BYD EA-1 Dolphin (2021)



VW ID.5 - MEB (2022)

Notstrom
to Go!



2021 – Vehicle-2-Load goes Massenware



BYD EA-1 Dolphin (2021)



Ioniq 5 (2021)



VW ID.5 - MEB (2022)

Notstrom to Go!

Kommunikation zwischen Wallbox und E-Auto

ISO 15118-20 (ab ca. 2023) bringt ... grid following, grid forming

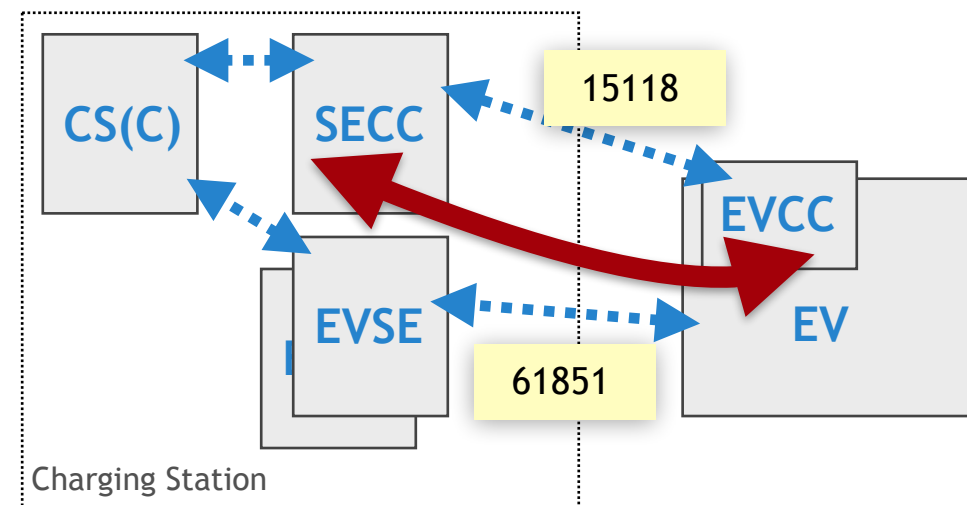


Aktivitäten von IEC TC 69 (Elektromobilität)

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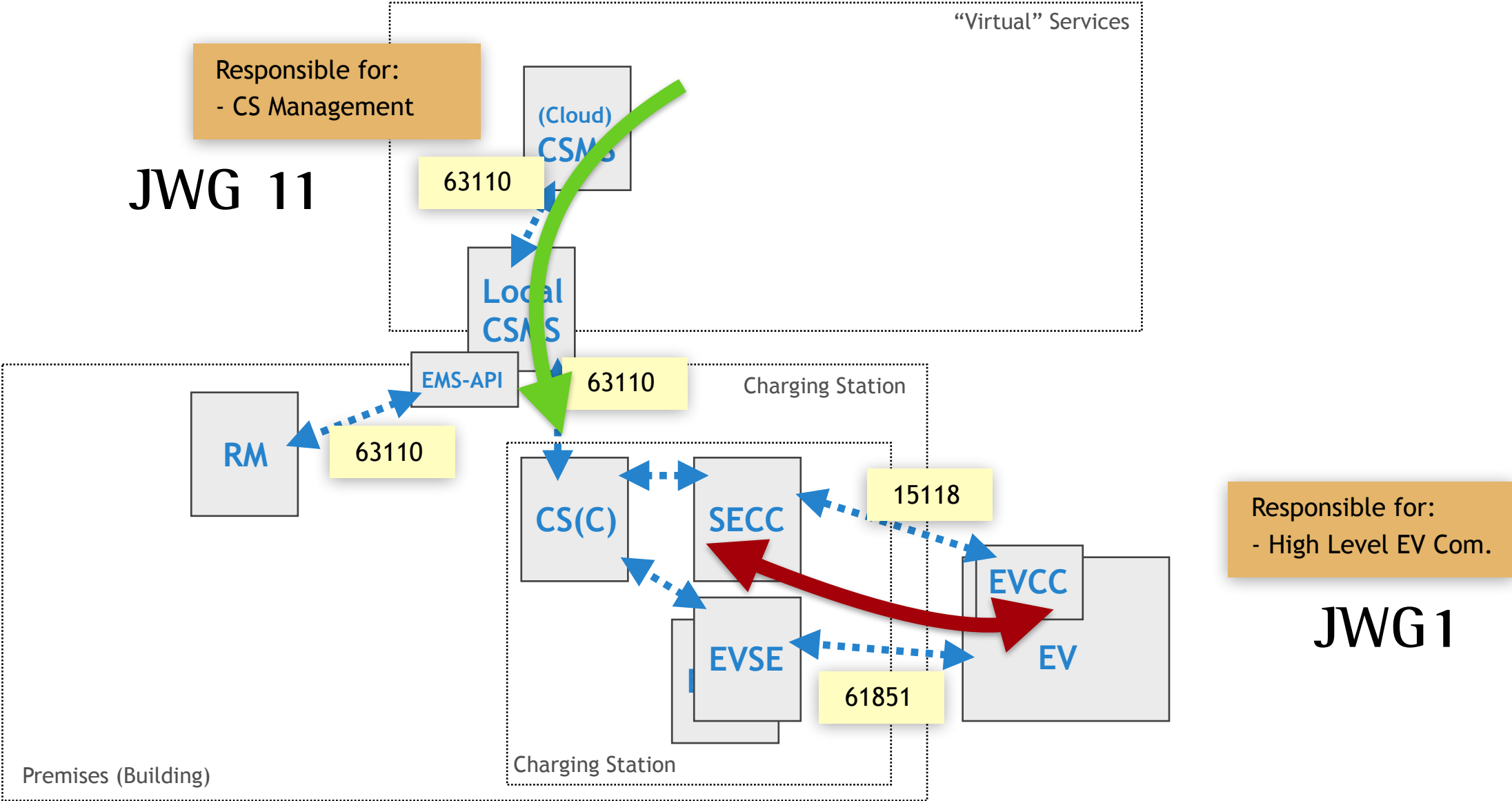
Responsible for:
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JWG 1



Aktivitäten von IEC TC 69 (Elektromobilität)

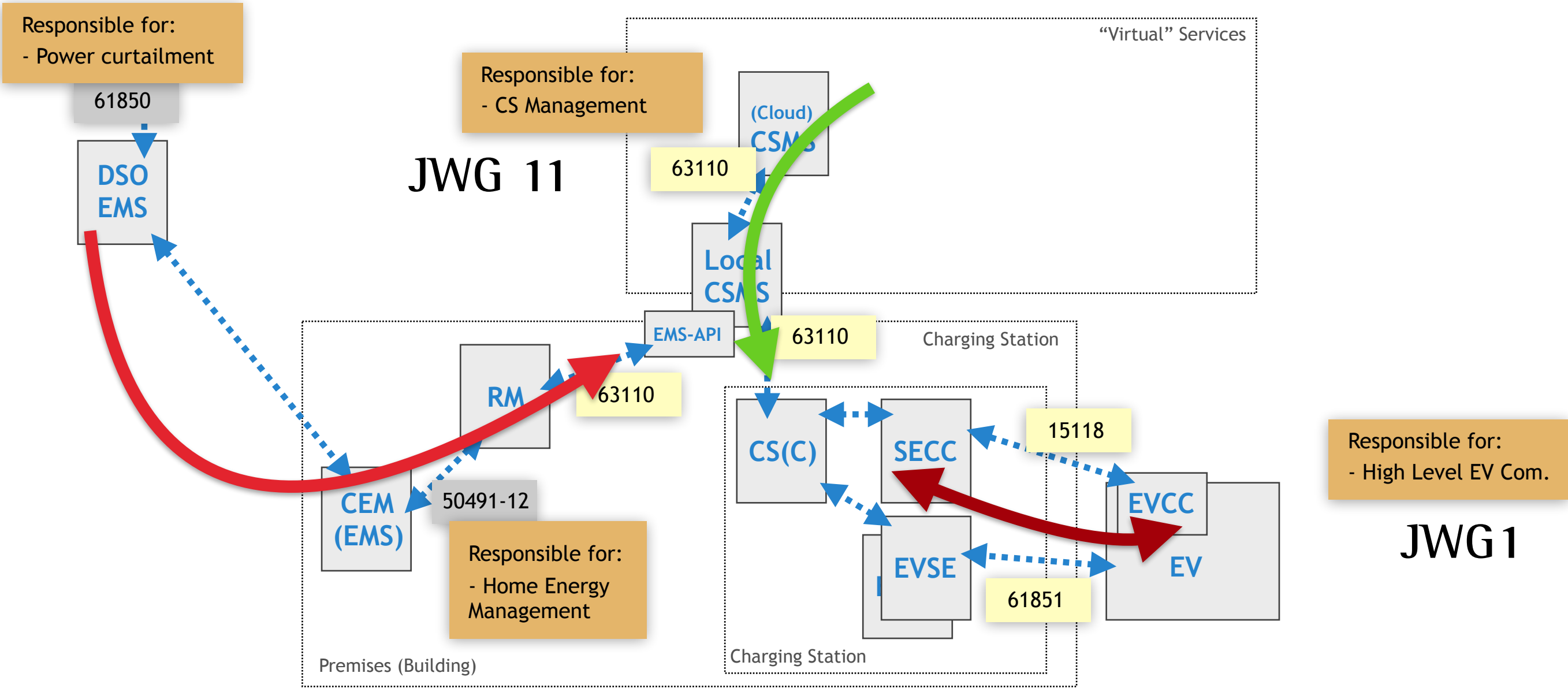
IEC 63110 ... Management von (x-Mio?) Ladesäulen





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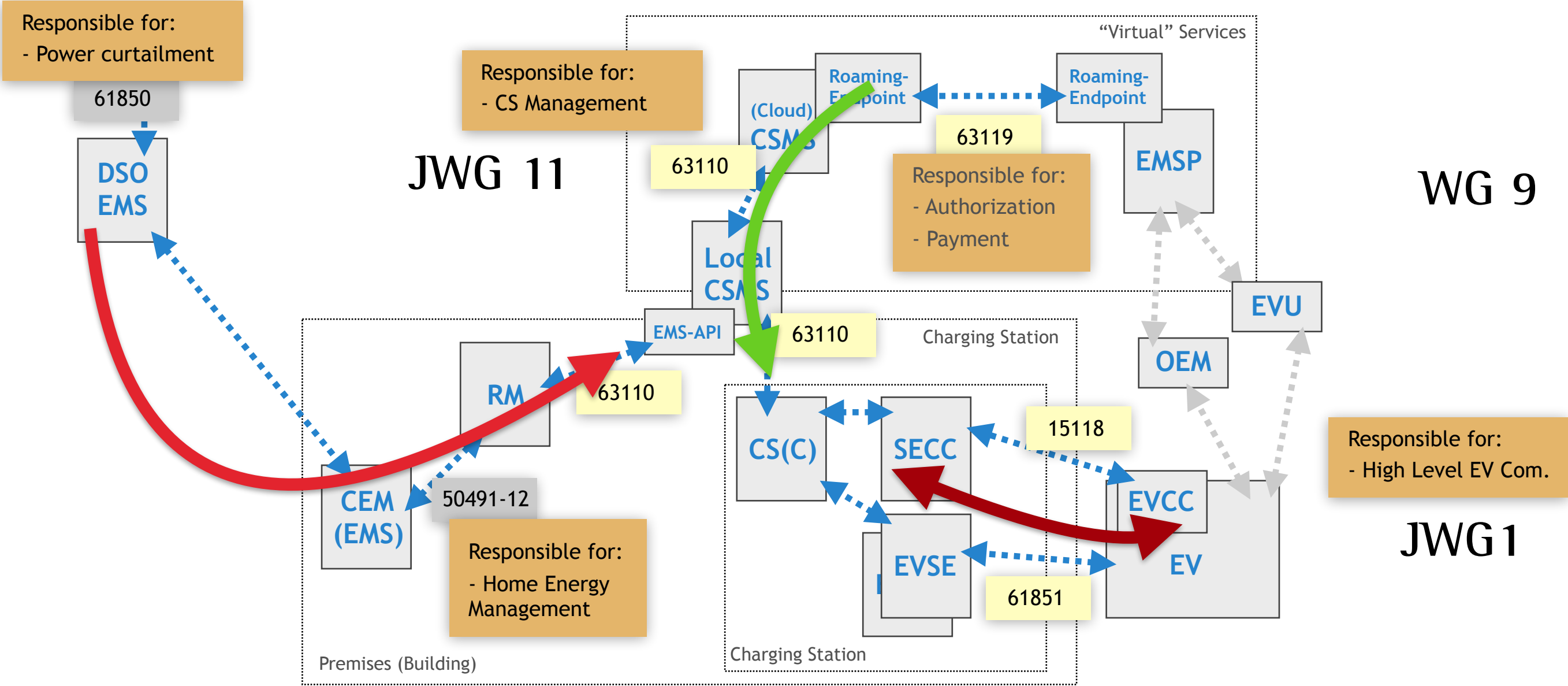
IEC 63110 ... Management von (x-Mio?) Ladesäulen und Integration in das Gebäudeenergiemanagement





Aktivitäten von IEC TC 69 (Elektromobilität)

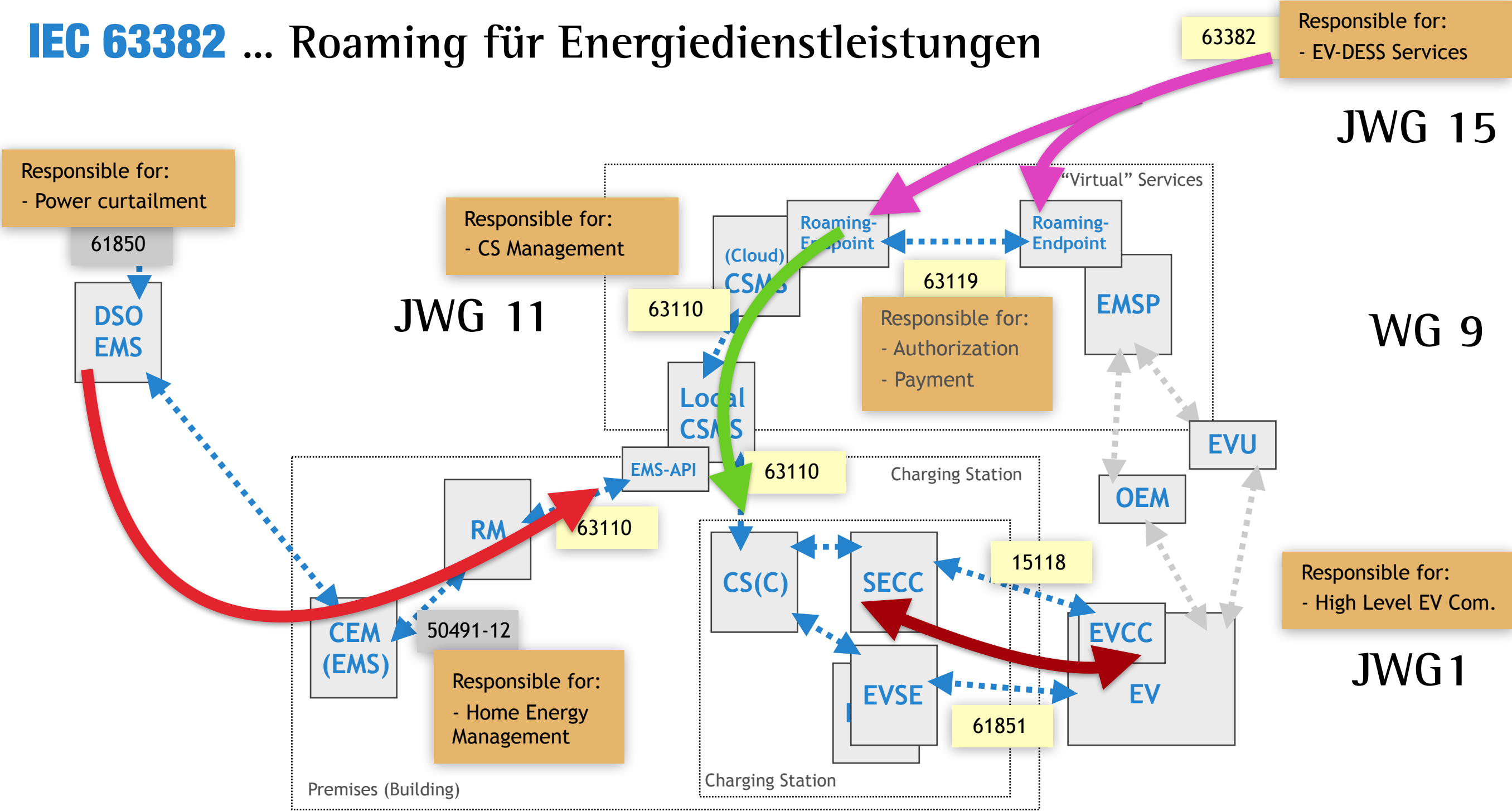
IEC 63119 ... Roaming für Mobilitätsdienstleistungen





Aktivitäten von IEC TC 69 (Elektromobilität)

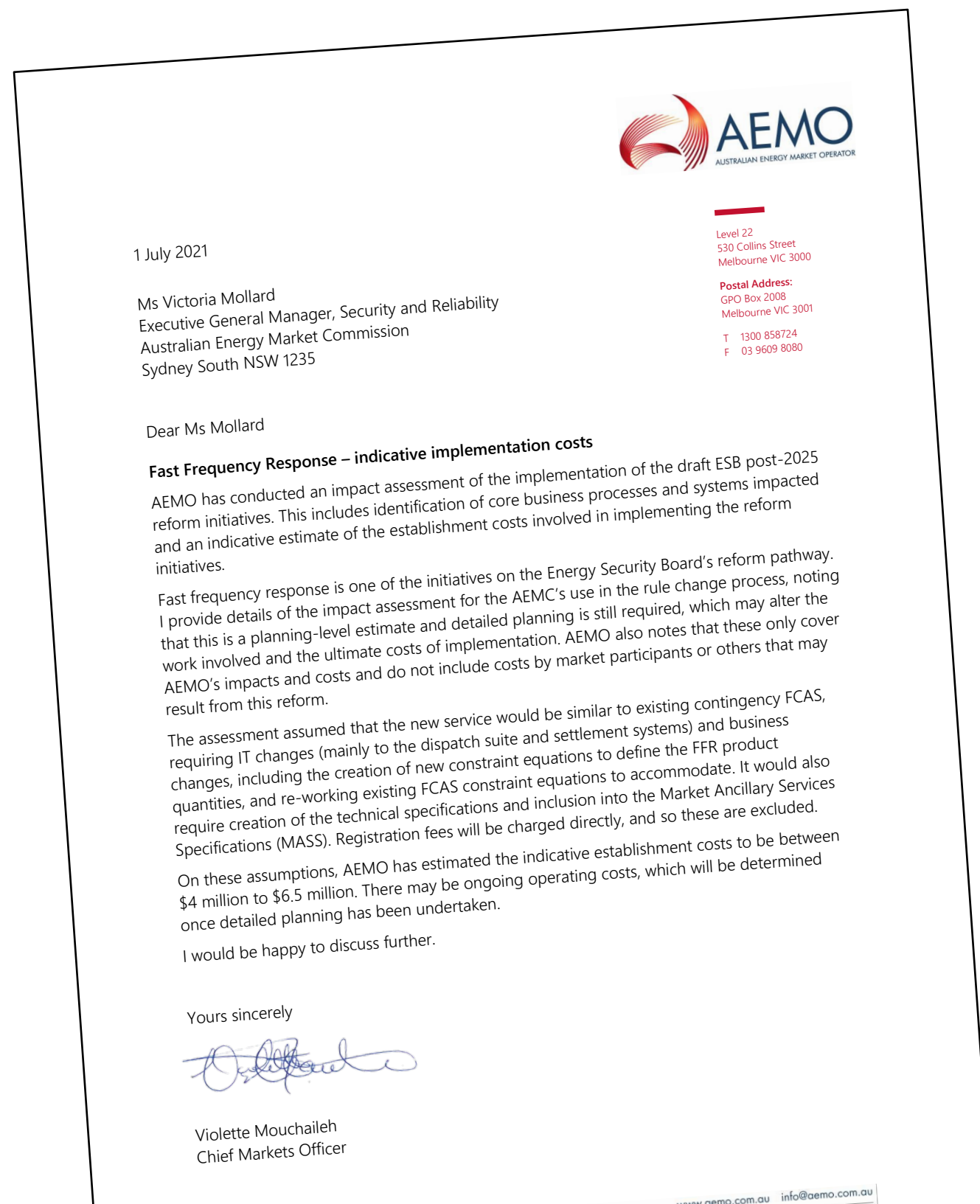
IEC 63382 ... Roaming für Energiedienstleistungen



Selbstregelung von Verbrauchern

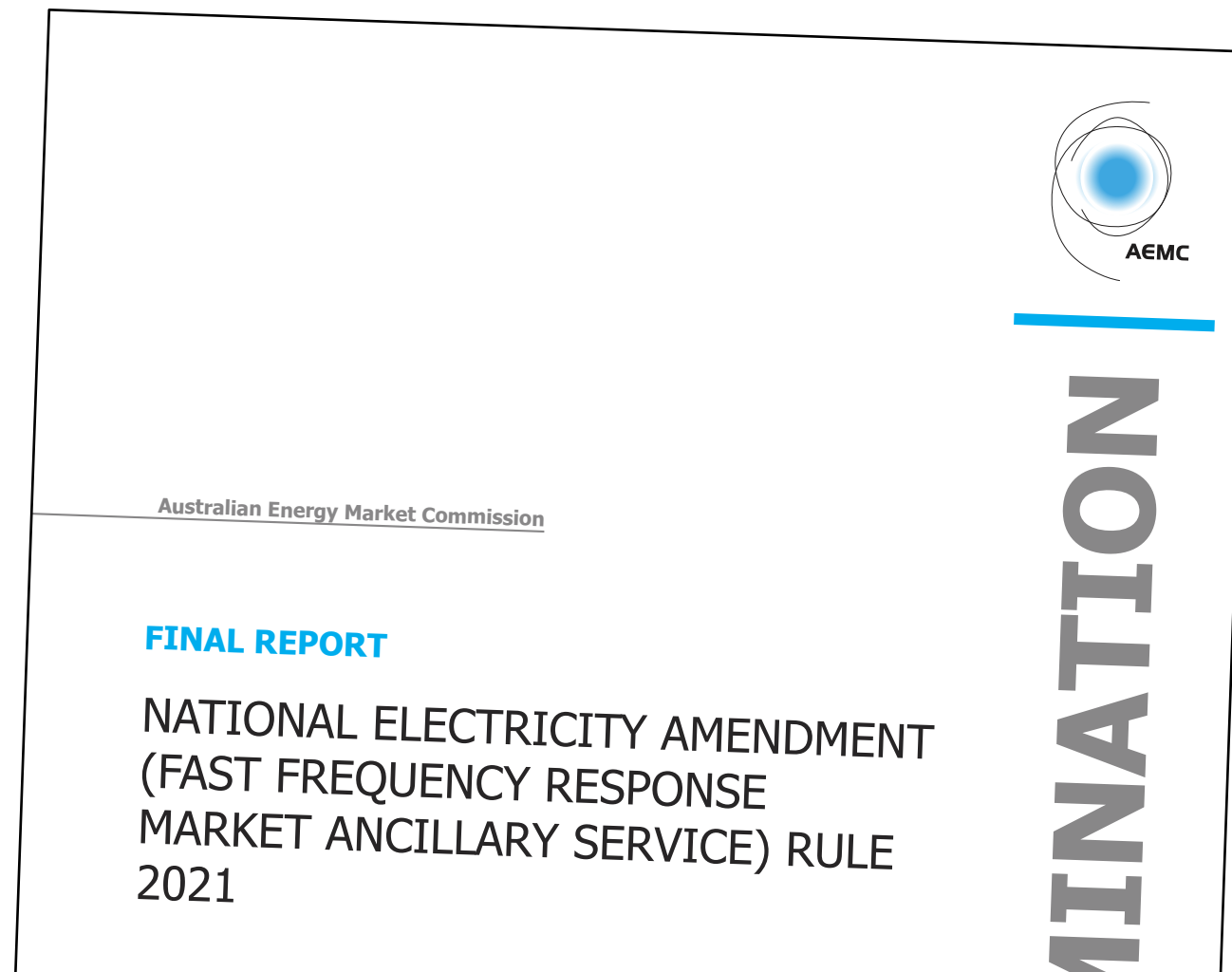


2021 – AEMC Fast Frequency Response

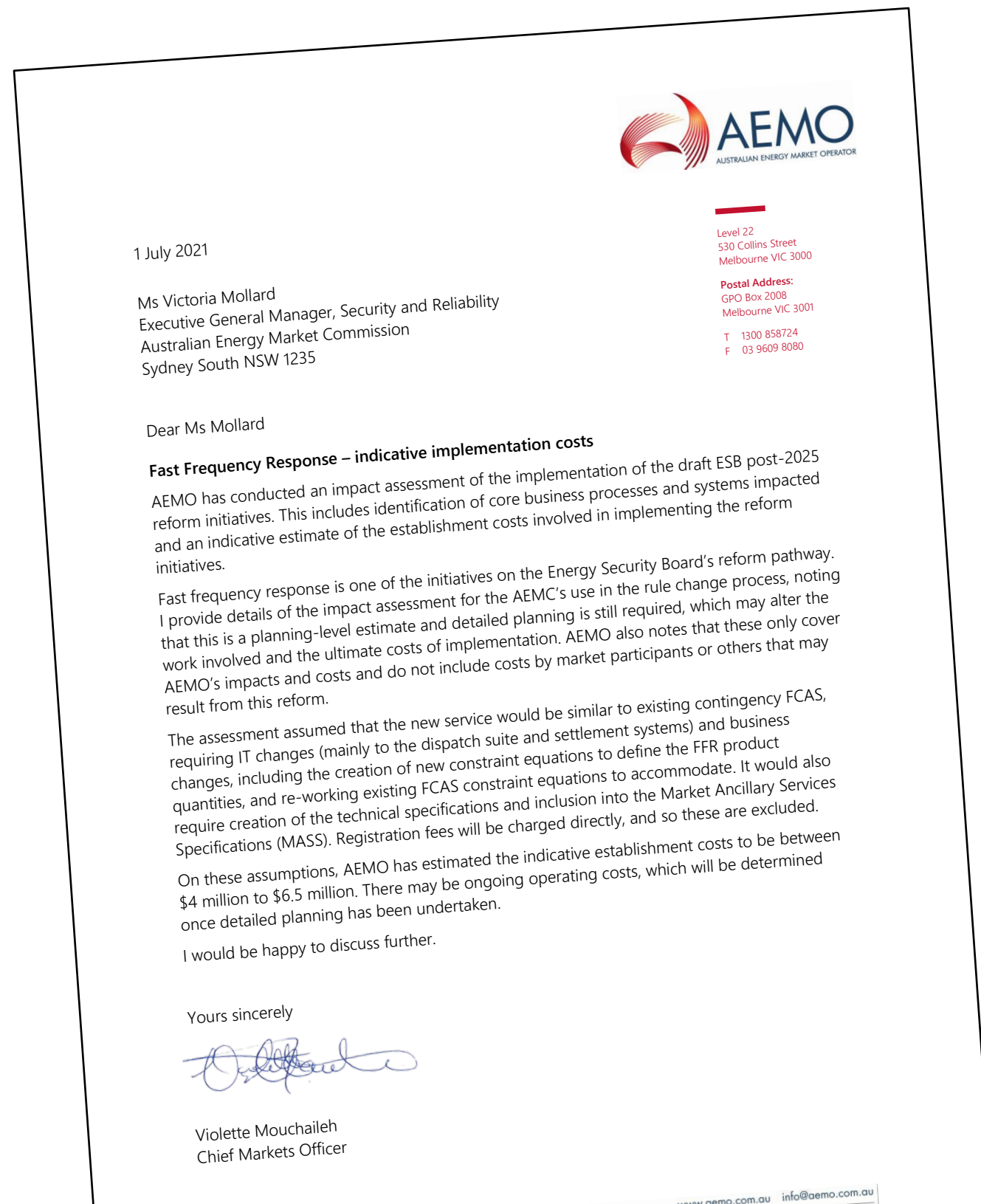


... uups ...

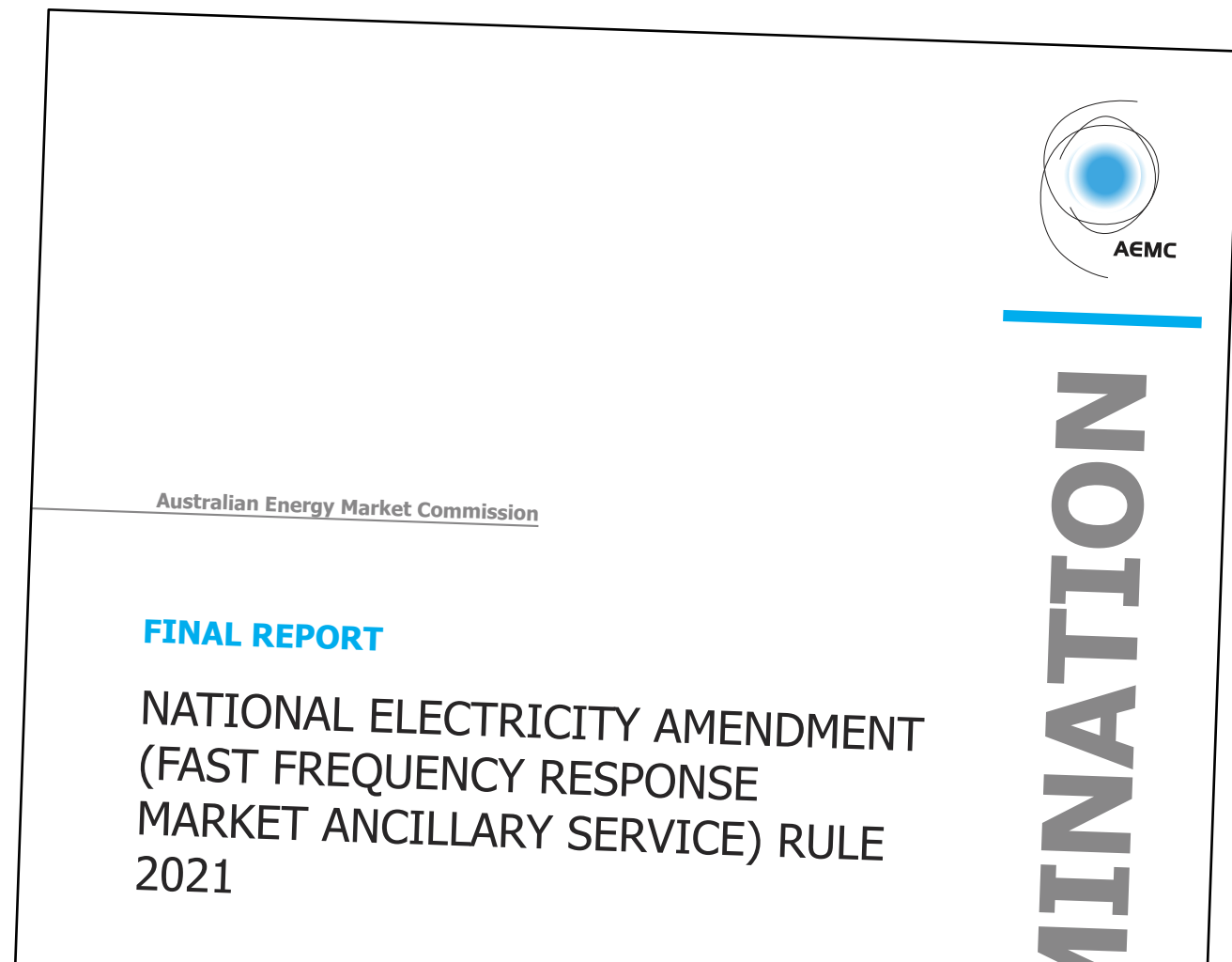
Leistungselektronik hat
keine Massentragheit



2021 – AEMC Fast Frequency Response



Fast Frequency Response ... Droop ohne Inertia





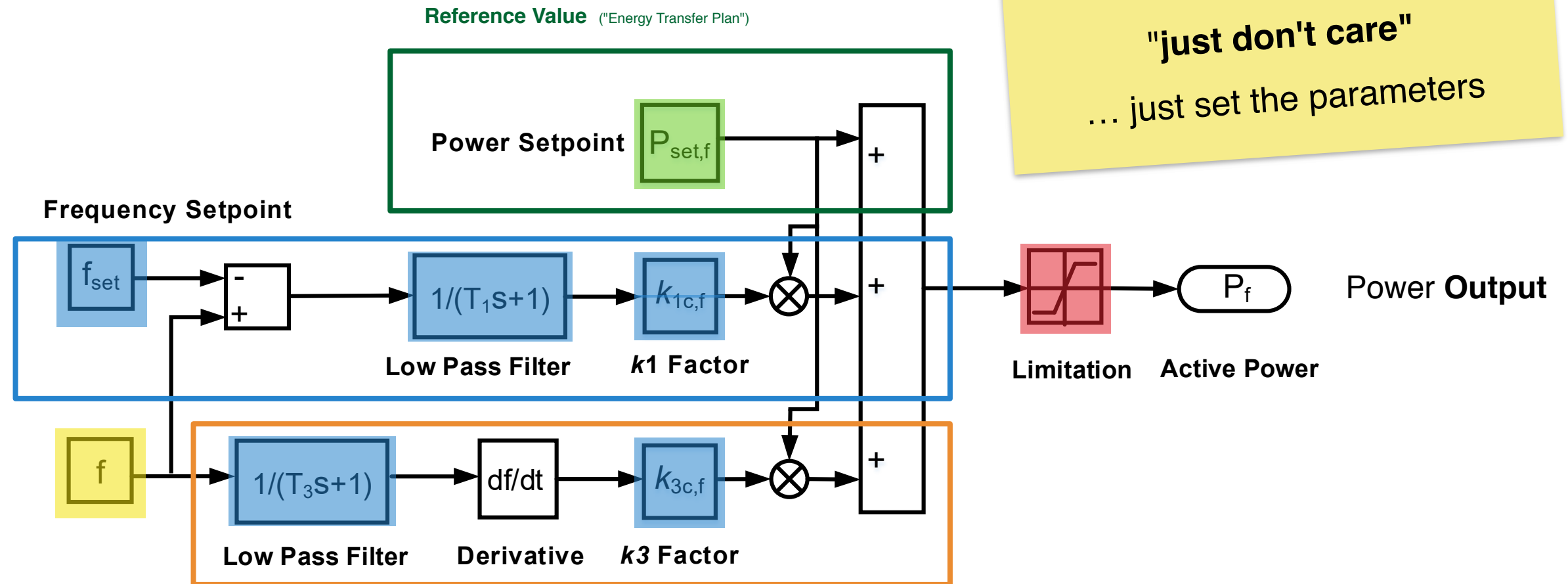
$P(f)$

Droop Control

(proportional)
Frequency
Response

(Syn.) Inertia

(derivative)
Frequency
Response



Power Converters
"just don't care"
... just set the parameters

Figure 6 – Function diagram of a combined frequency control function for continuously controllable dispatchable load

Dynamic:



Measured



(Self-)Assigned

Static:



(Hardware or System)
Limits



Configurable

2021 – IEC TS 62898-3-3



		8B/105/CD	
COMMITTEE DRAFT (CD)			
PROJECT NUMBER: IEC TS 62898-3-3 ED1			
DATE OF CIRCULATION: 2021-11-12		CLOSING DATE FOR COMMENTS: 2022-02-04	
SUPERSEDES DOCUMENTS: 8B/77/CD, 8B/88A/CC			
IEC SC 8B : DECENTRALIZED ELECTRICAL ENERGY SYSTEMS			
SECRETARIAT: China		SECRETARY: Mr Wenpeng LUAN	
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 8, SC 8C, SC 22E, SC 22F, TC 57, TC 69, TC 120			
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input type="checkbox"/> SAFETY			
This document is still under study and subject to change. It should not be used for reference purposes. Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.			
TITLE: Microgrids - Part 3-3: Technical requirements – Self-regulation of dispatchable loads			
NOTE FROM TC/SC OFFICERS: This document (4CD) has been prepared by JWG1 SC8B (Microgrids). It is intended to be the last CD before the DTS, which is planned to be circulated in Q2 2022. Major changes in regard to the last CD refer to the: <ul style="list-style-type: none">- clearer introduction of the damping characteristic,- de-synchronisation strategies to cope with rebound effects, and- additions and modification of terminology.			

”Microgrids - Part 3-3: Technical requirements – Self-regulation of dispatchable loads”

CD ... published 2021-11-12

DTS ... planned for 2022-Q2

Scope is limited to **Microgrids**

which are

... forming a local electric power system
at distribution voltage levels ...



Aktivitäten von IEC TC 69 (Elektromobilität)

IEC 63382 ... Roaming für Energiedienstleistungen

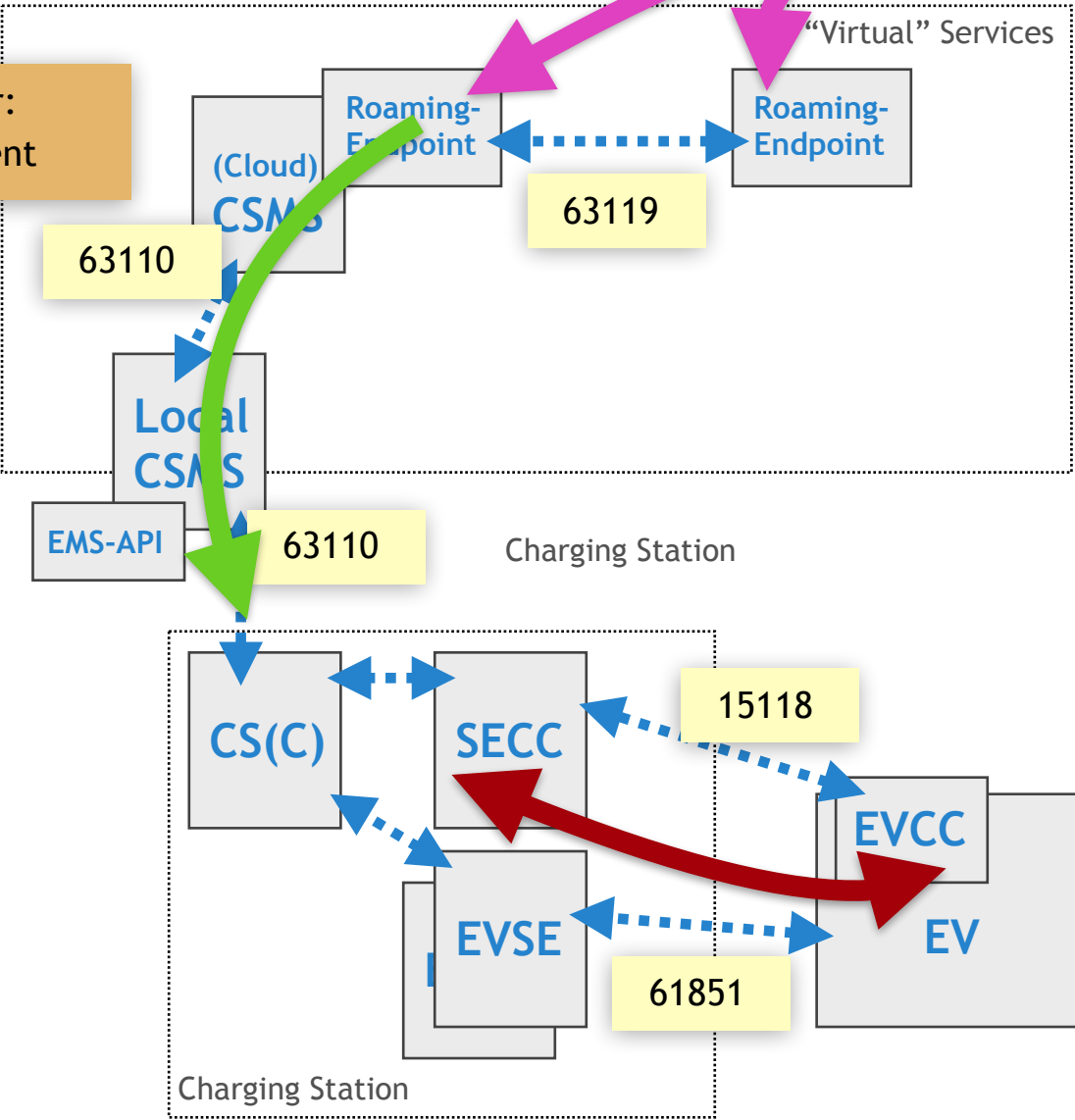
63382

Responsible for:
- EV-DESS Services

JWG 15

JWG 11

Responsible for:
- CS Management



WG 9

Responsible for:
- High Level EV Com.

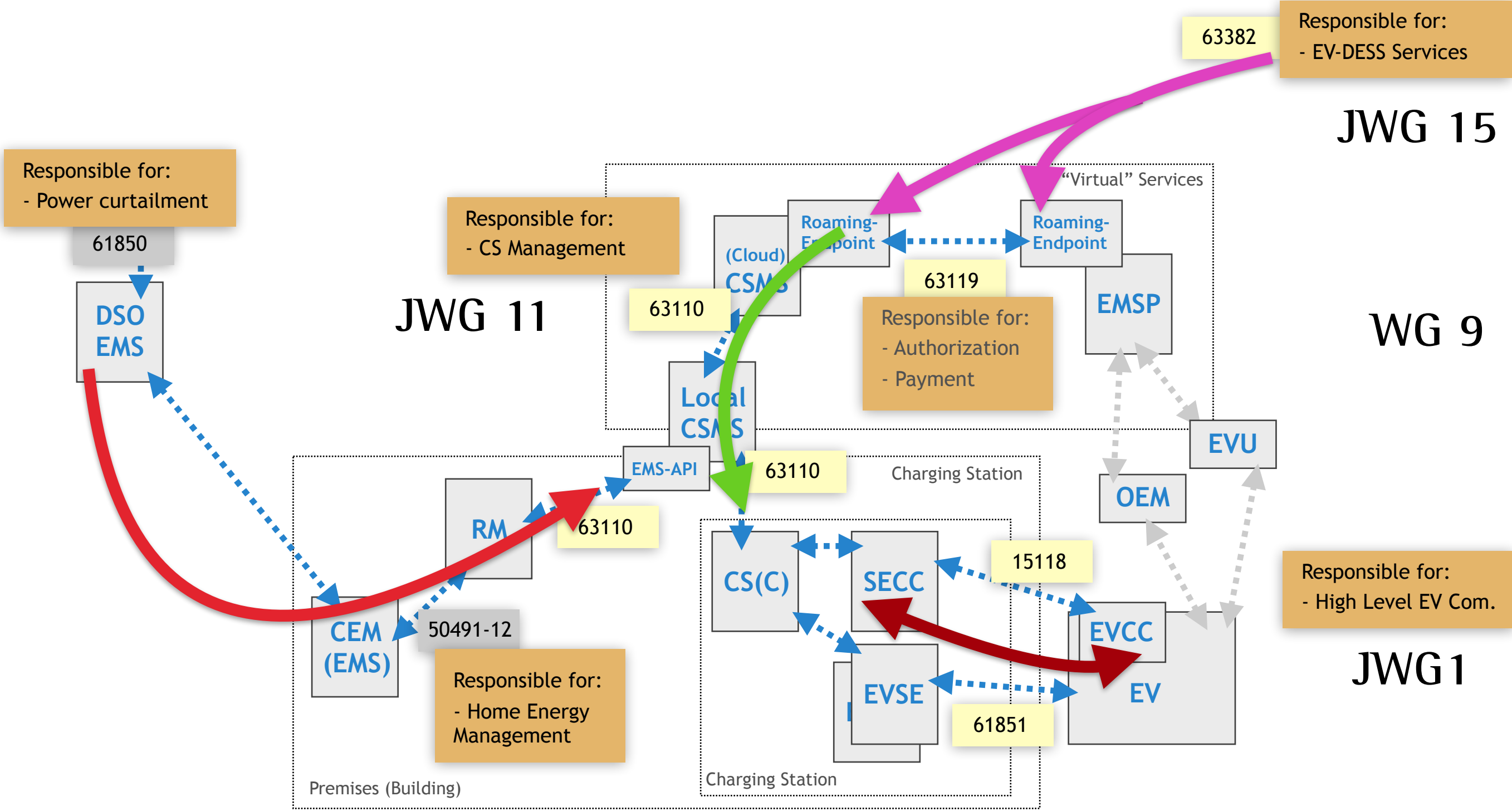
JWG 1

mit großem Fokus auf
"Fast Frequency Response"

... also im Prinzip
"Vermarktung von
Selbstregelung"



Aktivitäten von IEC TC 69 (Elektromobilität)



Selbstregelung von Verbrauchern



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