



AUSTRALIAN
ENERGY
COUNCIL

DOUBLE-SIDED
CAUSER PAYS
PROJECT
KNOWLEDGE
SHARING WORKSHOP

BEN SKINNER

GM POLICY

27 MAY 2021

Today's agenda

1. 9:00 – 9:05 Welcome and housekeeping
2. 9:05 - 9:30 Introduction (Ben Skinner)
 1. The project
 2. Simple introduction to DSCP
3. 9:30 – 10:45 DSCP control and pricing concepts (Hugh Bannister)
4. 10:45-11:15 Break
5. 11:15-12:20 DSCP Moving to implementation (HB+Jabez Wilson)
6. 12:20-12:30 Wrap up and next stages (BS)

Housekeeping

- Mute when not speaking please
- Zoom has a chat system
 - You can enter a question/comment to all
 - Or address to chair who will present to the speaker
- Objective is to seek a dialogue
 - Can put hand up and chair will invite comment
 - (within time constraints)
 - Turn on camera when speaking
- You may interrupt if critical to the current point
 - But please use sparingly
- Session will be recorded and uploaded to www.energycouncil.com.au

There will be no slides, whiteboards or breakout groups:
that's a promise! 😊

The DSCP project

- DSCP concept always existed on the periphery of NEM consciousness
 - Conceptually interesting, but a bit “out there”
- The decline in performance of NOFB performance from ~ 2015 forced serious reconsiderations of procuring PFR
- 2019-20 CS Energy supported work by IES into DSCP, modelling one unit.
<https://www.energycouncil.com.au/media/0wjd52vu/20200325-double-sided-causer-pays-for-pfr-merged-final.pdf>
- Late 2020 AEC approached ARENA for joint funding for a thorough investigation
 - Project began April 2021

The DSCP project

Stage	Indicative Timing
Inception Report	16 April 2021
Control and Pricing Theory Report	14 May 2021 (comments still taken on board)
Interim Workshop	27 May 2021
PFR Performance Analysis Report	30 July 2021
Project Summary & Conclusions Report	30 September 2021
Knowledge Sharing Workshop	30 September 2021

<https://www.energycouncil.com.au/media/wzpjzrjs/dscp-overview.pdf>

DSCP Project team

The Experts

Name	Position	Organisation	Telephone	Email
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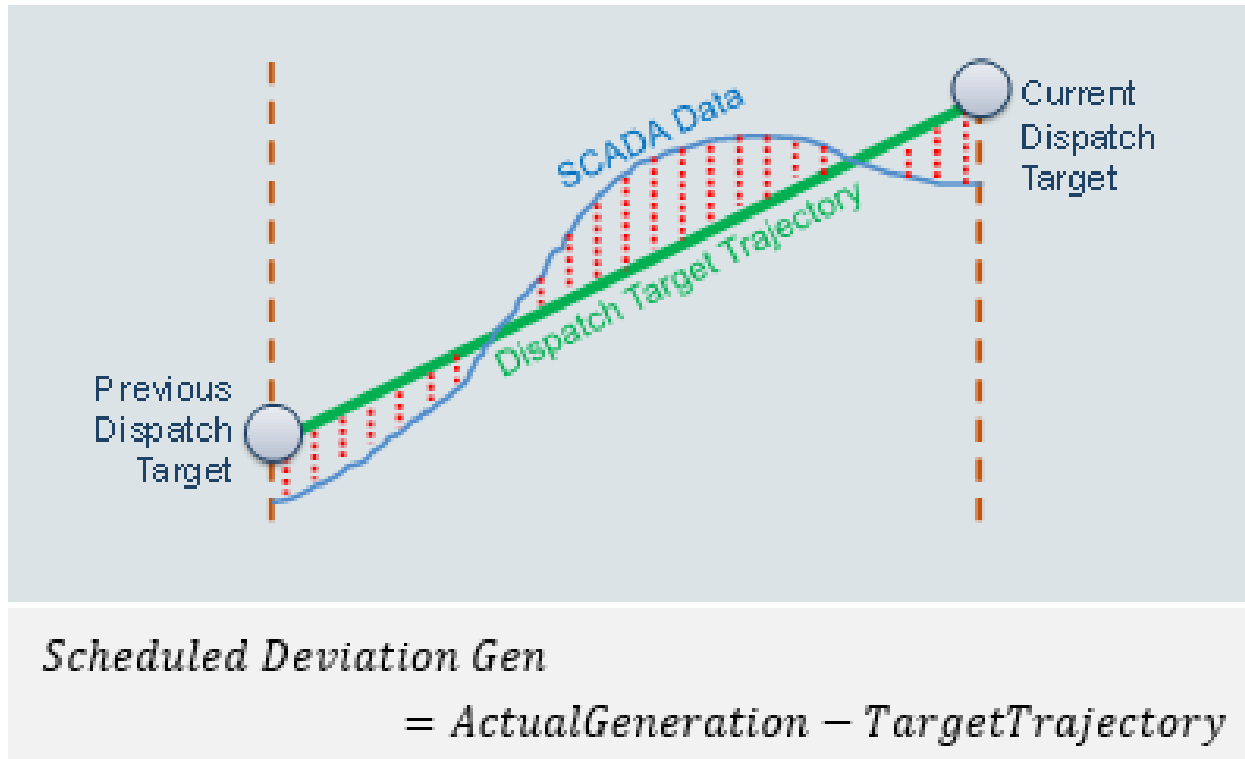
Support Crew

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Qu'est-ce que c'est le double sided causer pays?

- A distributed incentive to support the system frequency at all times through primary frequency response (PFR) action
 - Intended, primarily, to keep frequency close to 50Hz in “normal”, non-contingency conditions
 - Not “dispatched” by AEMO, just settled by them
 - Self-funding
- Does not supplant existing FCAS markets
 - Contingency markets, including “very fast”, (plus one-day an inertia market??), still needed
 - Regulation market, still needed for purchasing secondary frequency control –fine tuning by AEMO
 - Its cost recovery mechanism – (single-sided, ex-post) causer-pays is unrelated to DSCP and unaffected

Every asset has a presumed trajectory



- With this data we can:
 - Take from the causers
 - Give to the correctors

- If every asset hit AEMO's assumed trajectory; 50.000Hz
- We can measure how much each one doesn't

Some key points

- Everyone with 4sec data can be measured and can determine how much they deviated from AEMO's NEMDE assumption
- Everyone without (e.g. most load) can be assessed as one class
- Multiply the deviation (in MW) by
 - A linear factor of how far the frequency is from 50
 - A scalar to the "value" of correcting frequency
- Resolve all the payments within every 4 second interval
 - i.e. no lag like Regulation Causer pays

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- When Hz performance became unacceptable, mandatory, unrewarded PFR rule introduced 2020
 - Sunset 2023. Find a permanent mechanism with incentive to provide high quality PFR
 - Encourage those who can do it well and cheaply to provide, but others can opt out
 - AEMO unwilling to define a finite quantity of PFR:
 - Never know what's coming
 - If we can't pre-identify a safe volume of PFR, then can't dispatch a conventional FCAS market
 - DSCP doesn't need a dispatch volume to be pre-set
 - Relies on the “invisible hand” of DSCP incentives

The mandatory rule

- DSCP can operate within a mandatory framework:
 - Incentivising the “quality” of the mandated PFR
- It could be introduced with mandatory narrow-deadband PFR, improving Hz performance even further through incentivising performance
- DSCP would provide an incentive for the support to be retained, once narrow-band PFR becomes voluntary again
 - Ideally results in no observable to change to Hz performance as the mandation falls away

Why are we doing the work

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- Neither AEC nor ARENA support DSCP for introduction with the information to hand
 - AEC members familiar with dispatched markets, e.g. FCAS
 - But AEC recognises a dispatched market may be unacceptable to those who would dispatch it
 - Doubt re whether DSCP is technically robust
 - E.g. is it stable? Quality of SCADA?
 - We need this demonstrated

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Next steps

<https://www.energycouncil.com.au/media/wzpjzrjs/dscp-overview.pdf>

We are looking for commentary on the published reports and today

Send to Peter.brook@energycouncil.com.au

Please participate in the process ahead.

IES can provide further briefings to those not present today

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