

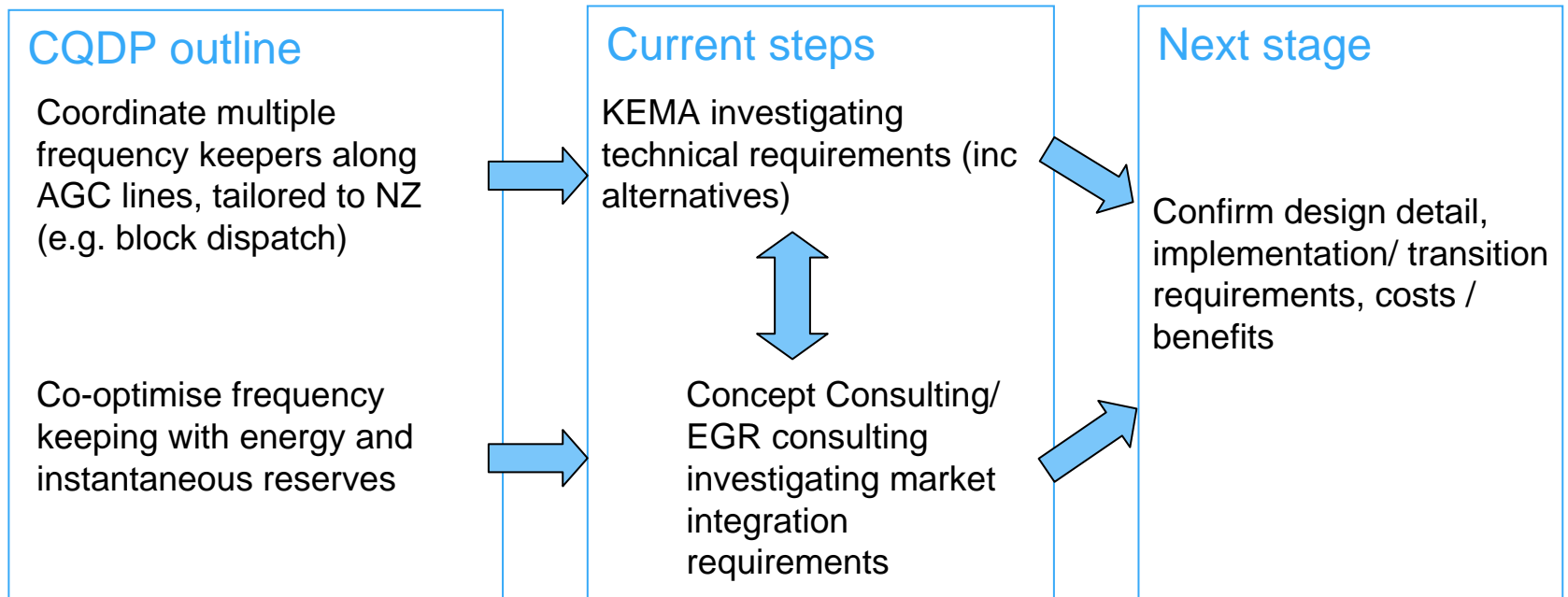


FK Strategic Development Common Quality Development Plan

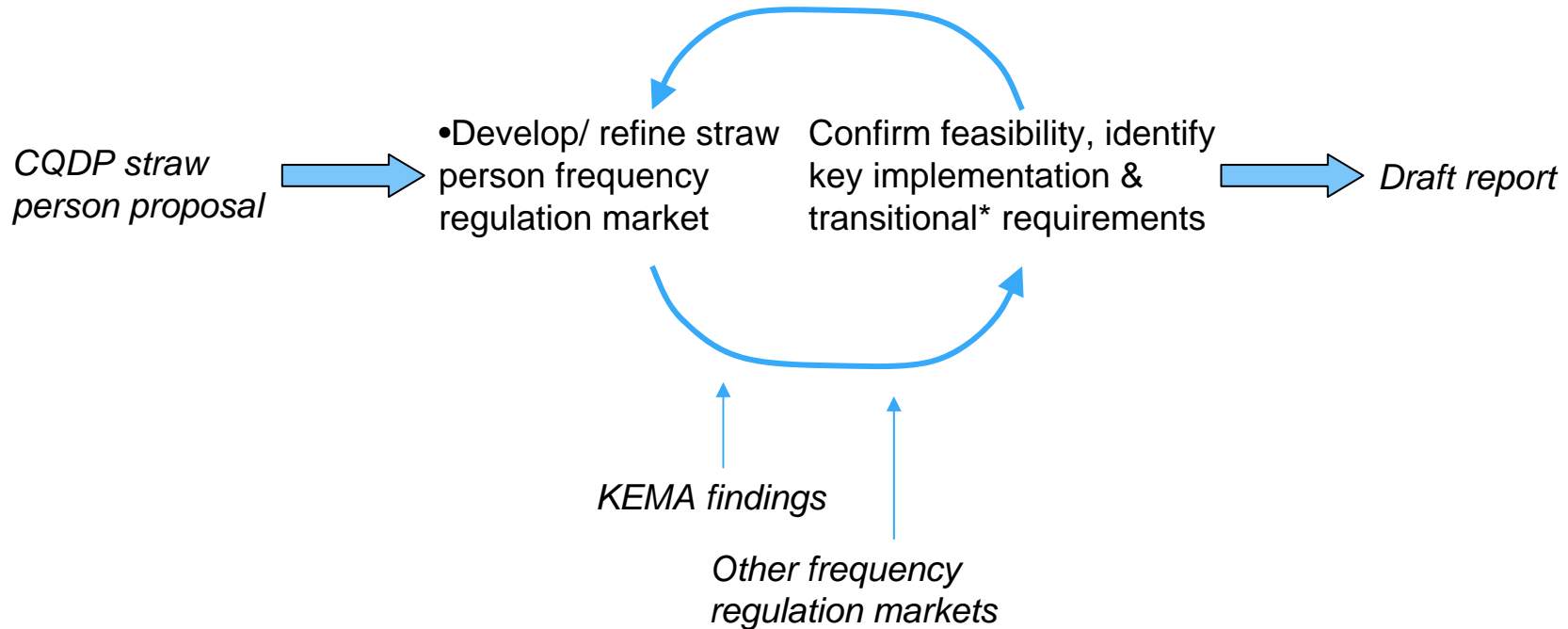
CQAG meeting 14 February 2008

Background

- The CQDP identified frequency keeping arrangements as a high priority strategic development opportunity:
(Linked to CQDP HVDC frequency sharing initiative)



Approach to Market Integration task



- including taking steps towards implementation rather than all at once
 - e.g. can we get RTGEN to calculate & issue ACE's to existing providers

Starting Point for FR straw person

Participation	Participants holding contracts with the SO could offer into the FR market (along similar lines to IR market arrangements).
Offers	Participants would submit half hourly FR offers subject to the same provisions as for energy and IR offers (up to day ahead, by units or stations, subject to 2 hour gate closure window etc).
Setting regulation requirements	SO would determine, and set in SPD, the amount of FR required in each half hour in each island (taking into account the role of the HVDC in managing frequency differences between islands).
Pre-dispatch schedule	SPD pre-dispatch schedules would co-optimize FR with energy and IR requirements to maximise overall economic benefits in each trading period of the pre-dispatch schedule. The co-optimisation process would automatically select providers & account explicitly for interdependencies & cost-trade-offs between FR and energy/IR.
Dispatch schedule	The SO would re-run SPD (with FR co-optimised as above) and re-dispatch the system at 5 minute intervals, or more frequently if necessary, as now. SPD would pass cleared regulation offers from each re-dispatch schedule to an AGC system which would calculate participation factors* for cleared FR providers.
Real time operations	Frequency error in each island would be monitored & FR quantities for NI, SI providers and the HVDC calculated every few seconds/ apportioned between providers according to participation factors*/ raise & lower signals simultaneously issued to FR participants. For block dispatch groups, AGC would issue raise/ lower signals for individual stations and local participant systems could distribute or, subject to meeting the aggregate FR instruction, redistribute instructions to individual stations/ units.
Pricing	Indicative prices from each dispatch schedule (currently published at 5 min intervals) would reflect co-optimisation of energy, IR and FR. The clearing price for supply of FR would be set ex post in each island (each half hour as for, and co-optimised with, energy/ IR prices).
Settlements	In addition to payments for energy dispatch and cleared IR, FR providers in each region would receive half hourly market (enablement) prices for any cleared FR capacity. FR providers would not be paid separate constrained-on/ -off payments (market clearing regulation price would account for this).
Compliance	As for IR, non-performance of FR providers would be a contractual or compliance issue.

* The proportion of frequency regulation allocated to a particular provider

Next steps

- Finalise the KEMA report after receiving feedback from parties interviewed
- Obtain draft market integration report for CQAG review and comment (next meeting)
- Finalise market integration report/ straw person design/ issues to be resolved
- Discuss findings with Board and seek agreement to initiate third phase (detailed design, costings, system/ rule change requirements, implementation/ transition plans)
 - formal process (CBA, consultation etc)