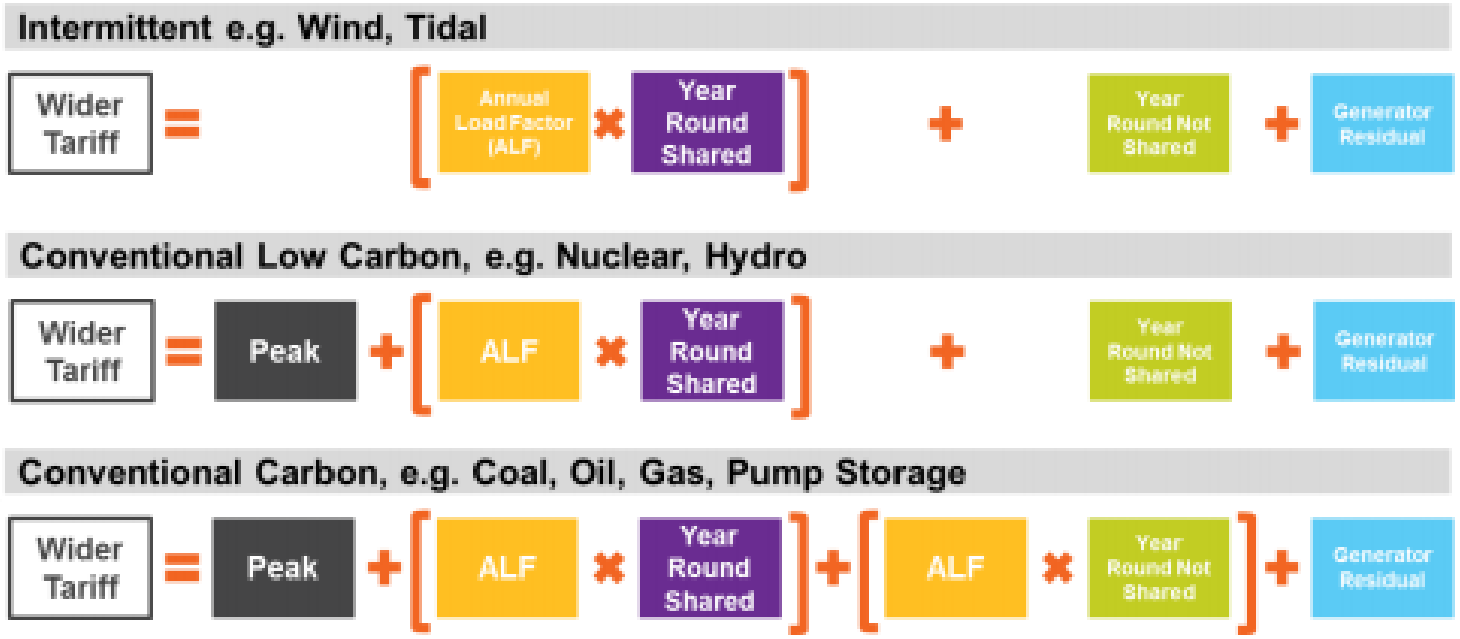
CMP331:
Option to replace generic Annual Load Factors (ALFs) with site specific ALFs

Energy Potential

Background –Annual Load Factors (ALFs)

- Annual Load Factors (ALFs) are used to determine a transmission connected generators wider TNUoS charge
- ALFs are used to allocate TNUoS costs that are incurred throughout the year (i.e. those costs that are not driven by peak demand)



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Background – Generic ALF Calculation

- Generic ALFs are based on an average of three years of historical ALF data (extracted from a data set of up to five years where the highest and lowest years are discarded or the lowest discarded if only four years of data is available)

Power Station	Technology	Yearly Load Factor Source					Yearly Load Factor Value					Specific ALF
		2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	
ACHRUACH	Onshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	33.6464%	36.7140%	44.3464%	38.2356%
AFTON	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	34.8738%	37.2641%
AIKENGALL II	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	33.5082%	36.8089%
AN SUIDHE	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	41.5843%	36.9422%	35.4900%	34.0938%	41.2323%	37.8882%
ARECLEOCH	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	33.8296%	29.7298%	36.8612%	19.7246%	35.1728%	32.9108%
BEINNEUN	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	30.9623%	25.8214%	31.7476%
BHLARAIDH	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	33.4339%	46.3209%	39.4047%
BLACK LAW	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	31.9648%	26.7881%	26.9035%	23.4623%	21.2137%	25.7180%
BLACKCRAIG WINDFARM	Onshore_Wind	Generic	Generic	Generic	Generic	Partial	0.0000%	0.0000%	0.0000%	0.0000%	36.0208%	37.6465%
BLACKLAW EXTENSION	Onshore_Wind	Generic	Generic	Partial	Actual	Actual	0.0000%	0.0000%	33.4635%	13.1095%	30.4870%	25.6867%
CARRAIG GHEAL	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	45.2760%	48.9277%	45.6254%	40.4211%	45.5371%	45.4795%
CLYDE (NORTH)	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	42.6598%	36.8882%	41.4120%	26.8858%	39.2619%	39.1873%
CLYDE (SOUTH)	Onshore_Wind	Actual	Actual	Actual	Actual	Actual	39.8941%	29.4115%	39.9615%	34.8751%	39.1634%	37.9775%
CORRIEGARTH	Onshore_Wind	Generic	Generic	Generic	Partial	Actual	0.0000%	0.0000%	0.0000%	22.5645%	41.2013%	34.0750%

Fuel Type
Biomass
Coal
Gas
Hydro
Nuclear (by reactor type)
Oil & OCGTs
Pumped Storage
Onshore Wind
Offshore Wind
CHP

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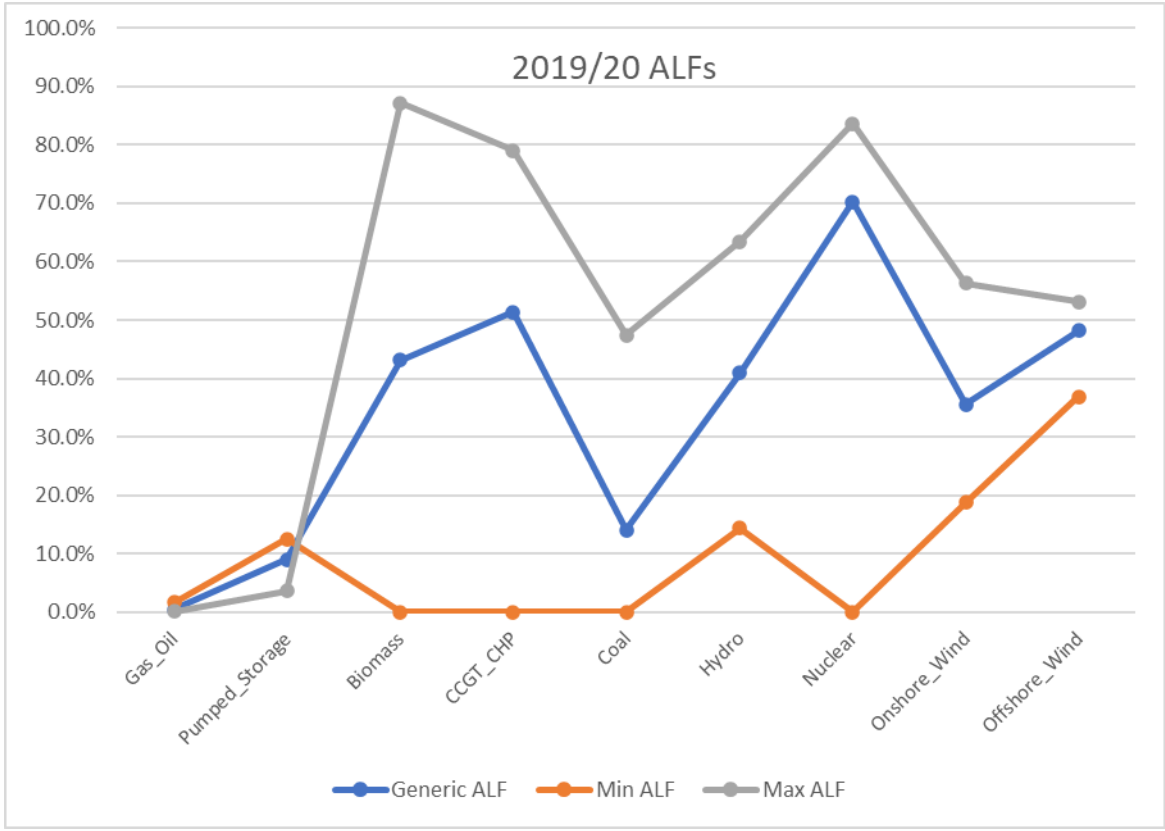
Defect – Issue with Generic ALF

- Generic ALFs can be very different to actual load factors for a generation type.
- This can lead to a generator over or under paying for TNUoS:
  - ALF < generic ALF: Generators pays too much TNUoS
  - ALF > generic ALF: Generators pays insufficient TNUoS
- Range of ALFs can be large as illustrated in the graph (e.g. onshore wind varied between 18.7% and 56.3% for 2019-20 values)



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Proposed Solution

- The proposed solution is to allow the Generic ALFs to be replaced with a site specific ALF where:
  - Forecast of the site specific ALF as determined by an independent third party
  - Investors require these reports for financing purposes.
  - Proposed criteria for a report to be valid is that it is "bankable"
  - As actual data becomes available this overwrites the site-specific ALF as it would with a generic ALF

- Proposer envisages that site-specific ALFs are more applicable to intermittent generation that cannot export on demand. However, mod should not be discriminatory, so non-intermittent generators should be able to put forward a case why their site should be eligible for a site specific ALF (e.g. where a new generator has a STOR contract)
- Working Group may need to consider if plant with site specific ALF are excluded from the generic ALF calculation

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Impact

- This solution enables new generators to pay TNUoS based on their expected use of the transmission of the network
- More closely aligns the initial TNUoS charge with the enduring charge.
- More closely aligns initial TNUoS charge with expected wholesale market revenue:
  - A high load factor power station would have greater wholesale income which offsets a higher TNUoS charge
  - A lower load factor power station would have lower wholesale income which offsets a lower TNUoS charge
- Any change in TNUoS revenue would primarily be recovered from other transmission connected generators.

Energy Potential