Burdekin Falls Dam

Dam located on the Burdekin River just over 200kms south of Townsville

Owned & operated by SunWater – built in 1987

Total capacity 1,860,000ML – current storage at 101% capacity

Largest dam in Queensland – holds four times the capacity of Sydney Harbour

Dam supplies irrigation in the lower Burdekin as well as coal mines in the Bowen Basin

When needed, also a source of urban supply for Townsville City Council (TCC)

11,000ML reserved for urban use under an agreement that runs to 2020

For comparison, Adani Carmichael project likely to generate demand of 12,000ML
### Burdekin Falls Dam

#### What are we doing about it now?

<table>
<thead>
<tr>
<th>What is the problem?</th>
<th>Dam safety upgrade required by 2035 to meet state Guidelines.</th>
<th>Queensland Bulk Water Opportunity Statement (QBWOS) will address long-run requirements.</th>
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<th>Project feasibility for all three projects already under active consideration.</th>
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<td>Pipeline duplication has been identified as the most cost-effective option to assure Townsville’s future water security.</td>
<td>SIP commits $700M over 4 years, most in regional QLD.</td>
<td>State has made significant investments in TCC, including Stadium and inaugural City Deal.</td>
<td>Scope to consider projects under proposed Regional Cities agenda.</td>
<td>Pending final investment decisions, projects could be fast-tracked to commence in FY2017-18.</td>
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<td>Private sector hydro scheme did not proceed (Dec 2014) following changes to national Renewable Energy Target.</td>
<td>State has own target of 50% renewable generation by 2030. Only 450MW at present, but 3,600MW in pipeline.</td>
<td>Consider project eligibility under NAIF.</td>
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**Three key projects proposed:**
1. Wall raising to meet safety requirements plus capacity raising (150,000ML) (combined cost $550m);
2. Pipeline duplication to supply Townsville City Council ($225M)
3. 50MW Hydro-scheme to supply 30,000 homes ($200M).

These projects have the potential to contribute significantly to Townsville’s future economic development and growth.†

† Note all costs are indicative, with final costs subject to business case development. Note the Hydro scheme cost is an initial investment figure supplied by the project proponent (Meridian Energy) in 2014.
Project primers:

**Dam Raising**
- Initial requirement to meet state *Guidelines on Acceptable Flood Capacity for Dams* (Jan 2013) – project cost $250M.
- Stage 2 proposal to raise the dam wall by 2 metres, to deliver 150,000ML – project cost $300M.
- Stage 2 dependent on delivery of initial safety upgrade.
- Minimal land acquisition likely.
- Capacity raising will deliver additional water for irrigation development.
- Demand also through ongoing population growth in TCC and increased mining activity in Bowen and Galilee Basins.
- Capacity raising, however, would likely be a sunk cost at this time, with irrigators and mines unlikely to need to access additional supply at likely commercial values over the short run.

**Pipeline duplication**
- TCC accesses water primarily from Ross River (233,000ML) and Paluma (11,800ML) Dams.
- When supply is low, water is pumped from Burdekin to Ross River Dam.
- Pipeline has 130ML/day capacity.
- TCC has an agreement to 2020 to access 100,000ML from Burdekin Dam for future urban use.
- Modelling shows access to Burdekin would be required once every 9 years, increasing to once every 5 years in around 10 years' time.
- TCC modelling suggests demand will outstrip the pipeline’s capacity to top up the Ross River Dam.
- TCC studies have concluded that the most cost effective method for augmenting existing water supply would be duplication of the existing pipeline to the Ross River Dam – project cost $225M.
- New pipeline would expand capacity to 356ML/day – enough to fill 150 Olympic-sized swimming pools each day.

**Hydro scheme**
- Various hydro schemes have been considered throughout the operational life of the Burdekin Dam.
- Stanwell investigated a 37MW option in 2009 but did not proceed.
- Meridian Energy acquired the rights to develop a project in 2013.
- Proposed a 50MW (150GWh) hydro scheme to supply 30,000 homes – project cost $200M.
- Project would have generated 150 construction jobs, as well as being a significant local employer through the facility’s projected 60-year operating life.
- Meridian terminated the project in December 2014, citing federal government changes to the Renewable Energy Target.
- Note the wall raising proposed for the Dam would raise the generation capacity of the system, although no detailed analysis has been undertaken to date.
Burdekin Basin Water Resource Plan
Location Map
Proposed Pipeline Duplication