

## DESAL IN CHILE

# Multi-client desal plant in Chile seeks investors

The opportunity to co-develop one or more large-scale desalination plants for mining and agricultural customers will hinge on the extent to which they have already been derisked. The real challenge will be to get all the moving parts to line up at the same time.

Early-stage project developer Desala is looking to raise \$5.2 million by the end of this year to reach ready-to-build status on a multi-client seawater reverse osmosis project in Chile with an initial capacity of 2,050 litres/sec (177,120m<sup>3</sup>/d).

The call for funding represents an opportunity for a full-scale developer to secure an early equity stake in the project development vehicle, which carries with it a right of first refusal to take the project through to financial close, thus sidestepping a competitive tender.

Desala is already understood to have received interest from an energy generation company in Chile which is looking to enter the desalination space, and from a large industrial investor which is currently operating a desalination plant for a mining client in Chile.

“We’re inviting desalination operators to take an early stake in our Petorca project, and to hopefully have an opportunity to lead the project financing,” explained Ignacio Rodriguez, who oversees corporate and legal affairs at Desala. “We need not necessarily wait until a project reaches ‘ready to build’ status in order to transfer it – we are open to co-development agreements,” he told GWI.

With four large-scale reverse osmosis desalination projects at the conceptual phase, representing a potential capacity of 650,000m<sup>3</sup>/d at build-out (see map, right), the opportunity to strike a multi-project development agreement is also a realistic possibility. “We are open to a portfolio-level deal,” Rodriguez confirmed.

On paper, the idea of offering water supply security to mining clients at prices close to what they currently pay to extract and transport raw water – and at a fraction of what they pay to truck in water during the summer season – makes sense. Non-binding letters of intent equivalent to 1,500

lit/sec (129,600m<sup>3</sup>/d) of capacity have already been signed with mining, irrigation and real estate offtakers for the Petorca project (located in Valparaíso Region), of which more than half is understood to be with creditworthy mining clients – including Anglo American – under 20-year ‘take or pay’ agreements.

The tariffs paid by the mining companies would then subsidise agricultural users and rural communities, which would also benefit from the water supplied by the plant (see *GW* May 2022, p16).

Desala’s not inconsiderable challenge is to manage all the aspects of the project preparation phase so as to convince potential offtakers to convert their LoIs into bankable water purchase agreements, at the same time as securing environmental approval – all while making a developer-level return for its investors.

A key milestone for Petorca will be the lodging of an application for an environmental impact assessment (EIA), which is expected in Q4 this year. The preparation required to get the project to that stage will enable a much more accurate assessment to be made of the costs involved. Consequently, once the application is in the system, Desala intends to begin negotiating the conversion of the existing LoIs into firm water offtake agreements.

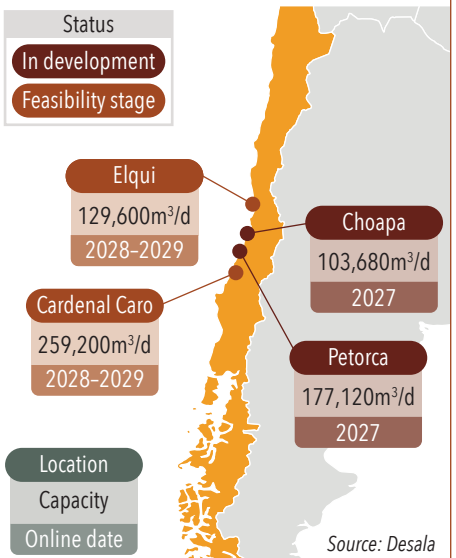
“We need to be respectful of certain project milestones in order to draft the best contract possible,” Rodriguez explained. “Once you enter the environmental impact system, you have a better knowledge of your capex and opex, and therefore you have a better knowledge of the tariff range that you’ll be able to offer your clients. At this point we only have non-binding letters of intent precisely because the project does not have a complete cost.”

The tentative timetable for the Petorca project envisages an engineering, procurement and construction (EPC) contract being in place by Q1 2025, with financial close to follow in Q3 2025.

Although the plant is expected to have an initial capacity of 2,050 litres/sec (177,120m<sup>3</sup>/d), the open-water intake is expected to be sized so as to accommodate a potential expansion to 2,800 litres/sec (241,920m<sup>3</sup>/d). The initial capital cost – currently estimated at \$420-450 million

## DESALA'S PORTFOLIO

Making a quartet of conceptual desalination projects bankable is the challenge Desala has set itself. Where is it looking to do business?



– will include the plant and 64km of trunk pipeline, with the intention that offtakers pay for the water at the point of delivery into secondary pipelines which lie outside the scope of the core development agreement (and thus Desala’s EIA process).

“The mining companies want to reserve an option to construct the secondary networks themselves, and to include them in their own environmental assessments, using their right to impose easements to source water for their operations,” Rodriguez observed.

While individual tariffs will be dictated by both distance and altitude, Rodriguez was at pains to point out that none of the potential mine sites is more than 500 metres above sea level, limiting the need to pump water uphill.

Furthermore, by utilising government funding to construct tertiary networks to supply rural communities, Rodriguez is convinced that the project’s social value can be maximised. “People can access desalinated water at a price 20 times lower than what they pay for water from trucks. That is the real impact of a project like this.” ■

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Ignacio Rodriguez, Desala