

Letter of Intent to Proceed
Industrial Seawater Desalination Facility
Economic Feasibility Study

The City of Corpus Christi, Corpus Christi Regional Economic Development Corporation, San Patricio Municipal Water District, Port of Corpus Christi, DuPont, OxyChem, Sherwin Alumina Company, LyondellBassell, Citgo, Flint Hills Resources, Valero, Topaz Power, AEP Texas, Cheniere Energy, and voestalpine Texas agree to partner on the completion of an Economic Feasibility Study of an Industrial Seawater Desalination Facility located in the region as a first step in determining the role saltwater desalination may play in providing water to industrial users in the area.

A general description of the scope and arrangement of the study is provided in the attached document, Industrial Seawater Desalination Facility Economic Feasibility Study.

This agreement is entered into as executed by each participant on the date of signature below.

City of Corpus Christi

By: _____
Ronald Olson, City Manager
Date: _____

**Corpus Christi Regional Economic
Development Corporation**

By: _____
John LaRue, Interim Chief Executive Officer
Date: _____

San Patricio Municipal Water District

By: _____
Brian Williams, Director
Date: _____

**Port Industries of Corpus Christi
(for industry participants)**

By: _____
Robert Barger, President
Date: _____

Industrial Seawater Desalination Facility

Economic Feasibility Study

Background:

The City of Corpus Christi (City), the Corpus Christi Regional Economic Development Corporation (CCREDC) and local industrial companies held a series of meetings to determine if there was interest in seeking answers to existing questions regarding the location, configuration, and operation of a desalination plant to produce industrial process water. Based on those meetings, there is interest in moving forward with completing an Economic Feasibility Study. The primary interest that the industrial customers have in this project is to provide a reliable source of water that does not rely on surface water and is not subject to any use restrictions that would be implemented in the event of a drought.

The *initial* effort under consideration consists of two parts. Part 1 - an engineering study to investigate project alternatives inclusive of costs, facility siting issues, water sourcing, water delivery, and brine disposal. Part 2 is an option to develop a Request for Proposal (RFP) for a desalination facility. Both parts will be *put out for bid* together as a single package *to manage costs should the effort proceed to Part 2*.

If *as a result of Part 1* it is determined that the delivered cost of process water to area industrial users is attractive, the intent is to pursue a second agreement *that would address the issues pertinent to Part 2 (the development of a Request for Proposal)* on how to Fund, Design, Construct and Operate a facility to produce industrial water.

Concept:

Develop a seawater desalination facility in either San Patricio or Nueces County with an output of roughly 10-30 MGD intended for industrial use. The product water would belong to those companies that had contracted (Take or Pay) for the plant output and would not be subject to any City drought related water restrictions.

Product water would ideally be delivered from the desalination facility into existing infrastructure that could, with nominal modifications, be dedicated to delivery of the water to industrial users willing to make a financial commitment to the project, or physically utilize the produced water.

The quality of water to be produced will not be a variable for the purpose of this study. The desalinated water quality will be what is achieved by the use of a single stage of reverse osmosis. The quality of the desalinated water produced will be confirmed by the study to significantly exceed the quality (Na and hardness) of the potable water currently produced by the Municipal facilities.

The study will assume the existence of an exchange or “water bank” that would allow facilities that are geographically distant from the desalination facility to effectively contract for water from the facility irrespective of its physical location. This exchange would permit the redirection of desalinated water “owned” by a distant facility (that does not have physical access to the desalinated water) to another facility located in the proximity of the physical distribution system for the desalinated water, and in exchange, require the Municipalities to deliver the corresponding volume of water to the distant facility.

Funding:

The anticipated cost of the two part effort is in the range of \$250,000-\$300,000. The CCREDC has agreed to fund \$150,000 of the Study and the Industrial Customers will fund an additional \$150,000, through the Port Industries of Corpus Christi (PICC). Any expenses over \$300,000 will be paid for by the city of Corpus Christi.

Guidance Teams:

A Steering Committee, made up of all project participants, will monitor the progress of the Project and provide guidance at critical decision points.

A Technical Working Group, from among the members of the Steering Committee, will assist in the selection of the Program Manager and development of the scope of work. The Technical Working Group will have the following representation:

- a. Three representatives appointed by the Port Industries of Corpus Christi
- b. One representative appointed by the CCREDC
- c. One representative appointed by San Patricio Municipal Water District (SPMWD)
- d. One representative from the City of Corpus Christi

Study Deliverables:

A preliminary engineering assessment and initial Performance, Cost, Time, and Scope targets for a desalination project, including a “screening quality cost estimate” of the expected cost per 1000 gallons of product water that takes into consideration “break points” for factors impacting cost, such as, facility output quantity, brine discharge location, etc. The **appropriate** existing fixed costs *associated with any existing municipal infrastructure proposed to be utilized* need to be included in the **delivered** cost of water to each of the industrial customers, so that they can understand the impact of this venture on their individual costs.

The preliminary engineering assessment would consider:

Available source water quality

Siting

Environmental issues (concentrate processing/disposal, use of chemicals in the treatment process, impact on the marine environment, etc.)

Access to power (consider a direct connection to a Co-Generation plant, consistent with current regulations)

Intake/Discharge configuration

Opportunities to use currently permitted intakes/outfalls

Connection to existing distribution system

Any other appropriate site specific factors/conditions

Review of current governmental water policies with recommended modifications, if any.

Confidentiality:

The study may contain trade secrets and otherwise confidential information. Participants agree to keep the study confidential among the group to the extent allowed by the Office of the Attorney General under the Texas Public Information Act. The study will not be released to the public unless agreed upon by the participants or unless required by the Office of the Attorney General under the Texas Public Information Act. Participants will not be required to disclose information pertaining to current or projected water use but will be required to indicate a volume of water that they would be interested in acquiring from such a facility.