



Efficient Cooling in Dominican Republic: Cooling as a Service (CaaS)

ACCELERATING MARKET TRANSITION

A switch to more efficient and climate-friendly cooling solutions, which currently consume approximately a fair share of the nation's electricity, would have profound impacts on the economic competitiveness and environmental footprint. The Caribbean Cooling Initiative (C-COOL) is making available a financial tool called Cooling as a Service (CaaS) enabling a new relation between suppliers and customers of the commercial and industrial sectors to leapfrog to better cooling technologies.

KEY BARRIERS

Despite the benefits of energy efficiency, barriers such as higher up-front costs, limited knowledge of the benefits of energy efficiency, other investment priorities and high-perceived-performance risks of relatively new technologies hinder investments in clean and efficient cooling. Although clean and efficient cooling has lower life cycle cost than standard technology due to lower operational costs, investment decision is sensitive to purchase price.

COOLING AS A SERVICE AT A GLANCE

Cooling as a Service is a promising combination of financial instruments to overcome these key market barriers to clean and efficient cooling. CaaS offers a pay-per-service model with integrated financial tools to recapitalize technology providers who own, maintain and operate the equipment. CaaS also supports circular economy: keeping ownership encourages providers to develop modular and recyclable systems.

KEY BENEFITS

By making clean and efficient cooling competitive with less efficient systems, CaaS enables customers to base their decision on life-cycle cost rather than on the purchase price of the equipment.

The customers benefit from lower whole-life equipment costs of the most efficient cooling technologies on the market, the absence of upfront capital investments, industry-leading equipment uptime made reliable through revolutionized predictive maintenance practices, and a transparent pricing structure.

DEVELOPMENT AND IMPLEMENTATION IN DOMINICAN REPUBLIC

C-COOL has been developing the CaaS mechanism in Dominican Republic, and is now working on the implementation of the model on a pilot project. The pilot project is yet to be announced. The project team has defined the financial structure including risk mitigation mechanisms for the model, has developed an economic modeling and pricing tool, and has developed contractual arrangements tailored to the Dominican Republic regulations. These tools will be made available in a toolkit and presented during a webinar open to all providers interested in offering Cooling as a Service to their clients.

HOW IT WORKS

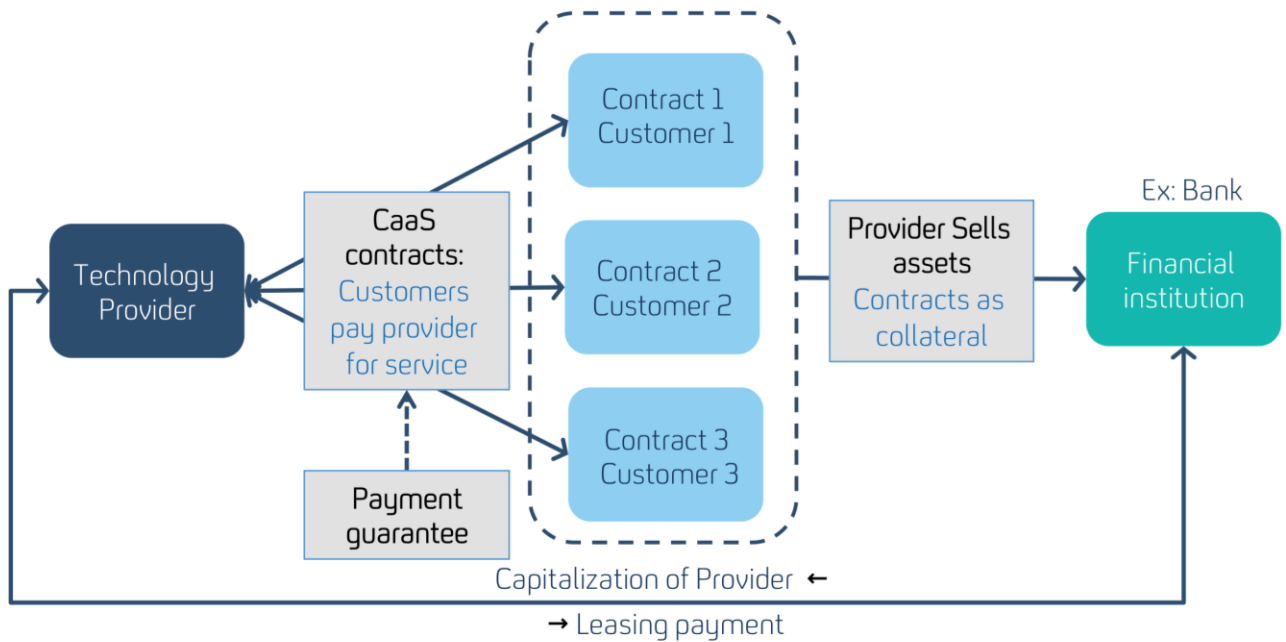
Cooling as a Service involves end customers paying for the cooling they receive, rather than the physical product or infrastructure that delivers the cooling. There are two main components in Cooling as a Service: relation between technology providers and clients defined in the CaaS contract, and the relation between technology provider and banks or funds to scale up the model.

A. CaaS contract

The technology provider installs and maintains the cooling equipment, recovering the costs through periodic payments made by the customer. These payments are fixed-cost-per-unit for the cooling service delivered (for example, dollars per tonnes of refrigeration, or units of cooled air), and are based on actual usage. The technology provider also pays for the electricity consumed by the equipment, which is an incentive to install the most energy-efficient equipment, and to perform high-quality maintenance. The price per unit is indexed to electricity price fluctuations as well as inflation.

B. Recapitalization and risk mitigation mechanism

The technology provider can recapitalize through innovative mechanisms such as sale and leaseback. The technology provider sells the operating assets to a bank and leases them back. The CaaS contracts serve as an additional collateral. A payment guarantee can be established to reduce the risk of default from the end-client, which can be endorsed so that banks reduce its exposure to payment default by technology providers seeking the use of the above-mentioned financing mechanisms. The Figure below illustrates how the recapitalization mechanisms works.



PARTICIPANTS

C-COOL's success depends on the input and collaboration of a range of organisations from the public, private and non-profit sectors. Senior policymakers and representatives from the private sector will provide overall strategic guidance and input on key deliverables to the project team. For information on the C-COOL CaaS and how to get involved, please contact the project's Sustainable Energy Finance Specialist, Thomas Motmans, at thomas.motmans@energy-base.org or U4E's coordinator, Brian Holuj, at brian.holuj@un.org

For more information, please visit: www.united4efficiency.org | www.k-cep.org