CAPTURING CO_2 USING LESS ENERGY AT SCALE

Validating a water-lean solvent process that can reduce energy use and decrease the cost required for carbon capture compared to current technologies

MAKING COAL-FIRED POWER PLANTS CLEANER

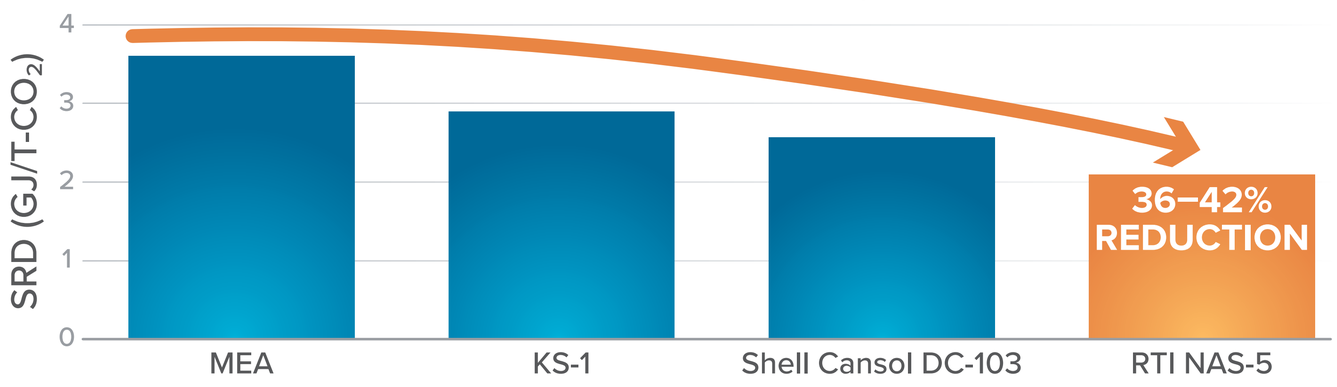
RTI's **water-lean solvent-based CO_2 capture process using coal-fired flue gas moves closer to commercialization** through testing completed at the National Carbon Capture Center and SINTEF's Tiller plant by:

- Increasing solvent performance
- Designing and building unique non-aqueous solvent (NAS) process modifications for the Tiller plant
- Performing long-term testing of non-aqueous solvent at larger scale on coal-derived flue gas

MODIFICATIONS IMPROVE CO_2 CAPTURE PERFORMANCE

Interstage coolers, a new regenerator packing section, and a rich solvent preheater have improved the NAS-based CO_2 capture process.

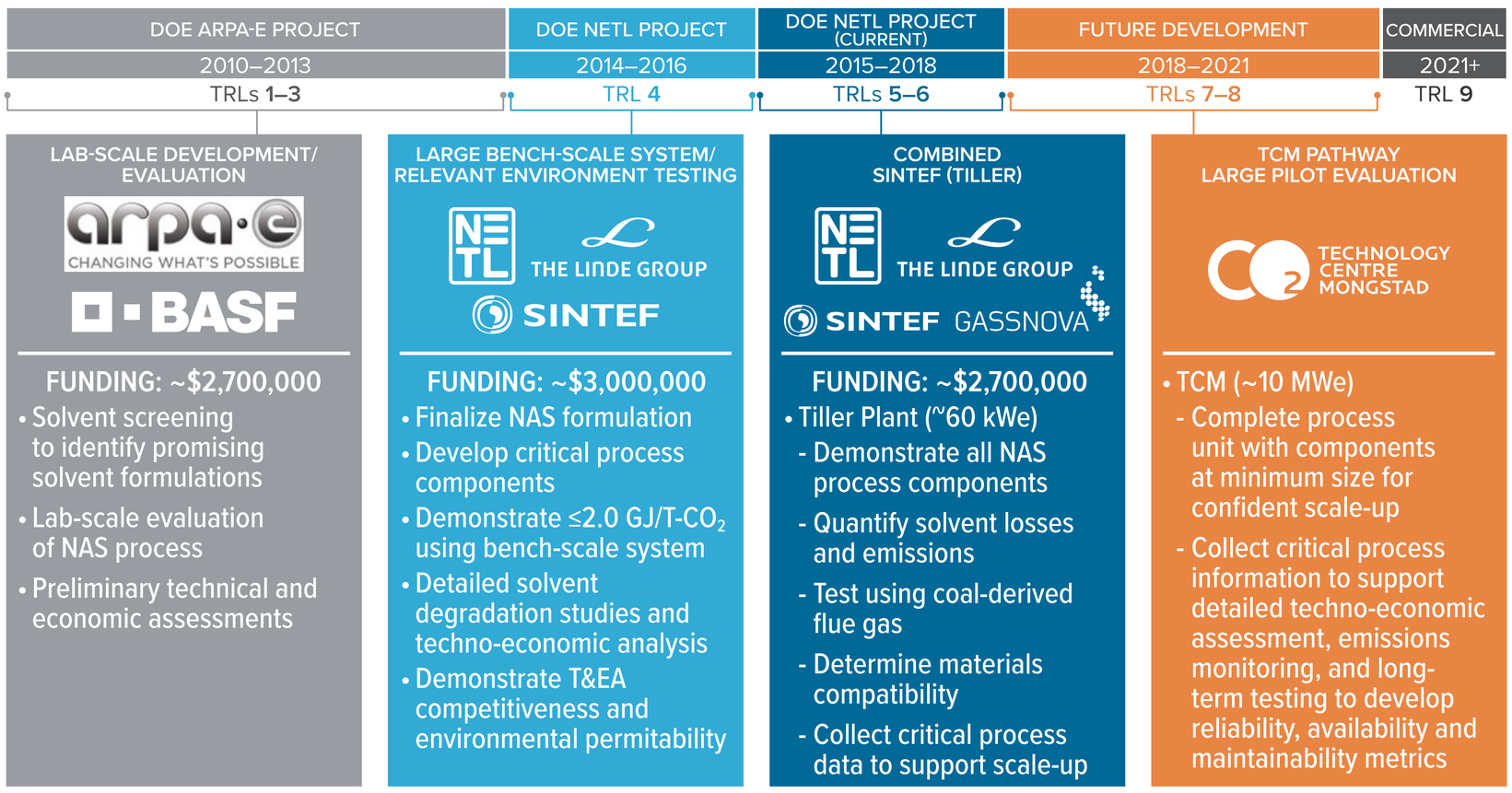
SPECIFIC REBOILER DUTY COMPARISON



LONG-TERM TESTING COMPLETED ON COAL-FIRED FLUE GAS

- 1,200 hours of NAS testing at the SINTEF Tiller plant
- Captured 90% of the CO_2 contained in the flue gas at a specific reboiler duty of about 2.6 MJ/kg CO_2

PATH TO COMMERCIALIZATION

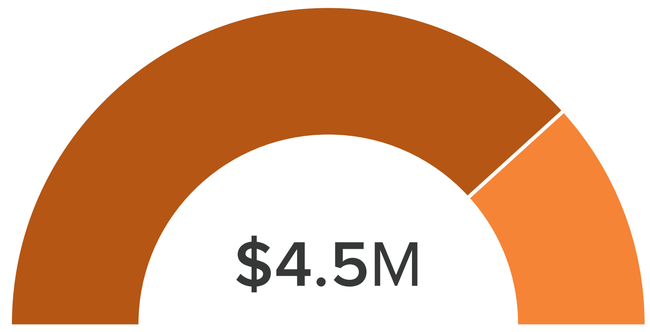


QUICK FACTS

AWARD NUMBER
DE-FE0026466

PROJECT BUDGET

FY18 FUNDING



FEDERAL	$3,468,584
RTI INTERNATIONAL	$1,064,068

CONTACTS

HQ PROGRAM MANAGER
JOHN LITYNSKI

TECHNOLOGY MANAGER
LYNN BRICKETT

FEDERAL PROJECT MANAGER
STEVEN MASCARO

PRINCIPAL INVESTIGATOR
JIM ZHOU

PARTNERS

RTI INTERNATIONAL

THE LINDE GROUP

SINTEF

CO2 TECHNOLOGY CENTRE MONGSTAD

GASSNOVA

2018 Science & Technology ACCOMPLISHMENTS SESSION

Reducing the cost of captured carbon and putting it to work for America

U.S. DEPARTMENT OF ENERGY | NETL NATIONAL ENERGY TECHNOLOGY LABORATORY