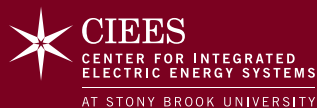


KEY PARTNERS



**Plus: More Than
20 National and
International
Collaborators**

CONTACTS

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Institute of
Gas Innovation
and Technology

AT STONY BROOK UNIVERSITY

WHERE GAS TRANSITION BEGINS TO ACHIEVE NET ZERO

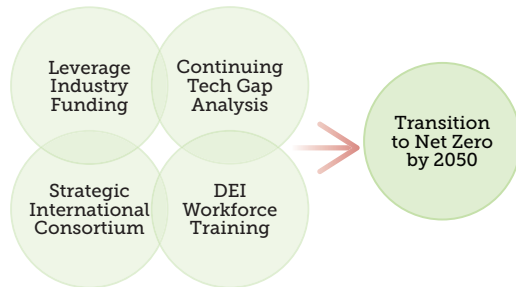
*The role of green hydrogen
in New York's energy future*



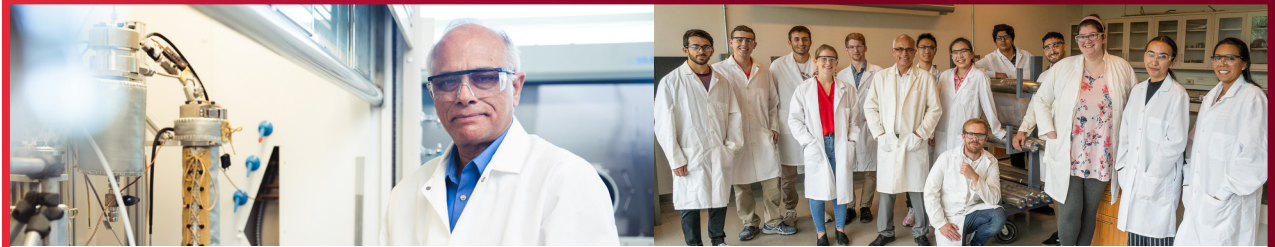
Initially a collaboration between Stony Brook University's Advanced Energy Research and Technology Center (AERTC) and National Grid, I-GIT provides a platform for academic and industry leaders to work together and develop clean and affordable solutions to reach the nation's growing energy demands. At the same time, they are meeting New York State's Climate Leadership and Community Protection Act's goals and the nation's objectives for achieving net zero by 2050.

I-GIT is administered within AERTC, where it is housed with offices and state-of-the-art laboratories. Its expert team of researchers, educators and investigators work closely with business, government leaders and policy-makers in developing innovative programs to hasten deployment of advanced technologies to benefit New York State customers.

FIVE PILLARS THAT DEFINE I-GIT

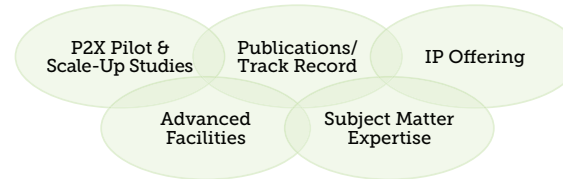


Academic and industry leaders collaborate on I-GIT initiatives.



Diversity, equity and inclusion (DEI) training for our future leaders

I-GIT'S UNIQUE OFFERING DRIVES INDUSTRY PARTNERSHIP



ONGOING PROJECTS

- Electrolyzer: Novel Membranes/Heat Management/Wastewater as Feed
- Purification Unit: Membrane H₂-Water Vapor Separation
- Hydrogen Storage:
 - Absorption/Desorption Kinetics in Metal Hydrides
 - Methanol Synthesis - Liquid Energy Carrier
 - Renewable Methane From CO₂-H₂
- Fuel Cell-Membranes/Catalyst/Heat Management
- P2G Unit Integration - HEAT Management
- Novel Heating/Cooling Systems Using Gas Hydrates
- Process Engineering

OFF-SHORE WIND AND SOLAR-TO-HYDROGEN

Research Focus

- Hydrogen Economy
- Renewable Methane Management
- Off-Grid Power on Skid-Mounted Units
- Economical Waste-Water Purification

Instrumentation

- Hydrogen Permeability Studies
- Spectroscopic Characterization Facilities at BNL
- Power-to-Gas Demo Unit
- Off-Grid Power Unit
- Hydrogen Blending Mimics
- Mini Pilot Units for Gas Conversions
- Gas Chromatographs
- Fermenter
- Sound-Induced Nanoparticle Synthesis

Research Capabilities

- Hydrogen-Materials Interaction
- Hydrogen-Methane Blending Studies
- Kinetics of Hydrogen Storage in Metal Hydrides
- Carbon Management
- Process Heat Management
- Gas-Induced Hydrate-Water Recycling for Purification

5 KW POWER TO PRODUCTS (P2X) TEST UNIT

