Ramon Arturo Gil-Egui

Professional Summary

March 2023

Business address: The University of Texas at Austin
Bureau of Economic Geology
University Station, Box X
Austin, TX 78713-8924

Professional Preparation

Academic Background

- Higher Education Teaching Diploma, Universidad Nacional Abierta (UNA)/Instituto Universitario de Tecnología de los Llanos (IUTLL), Venezuela, May 2004
- B.S. Economics, School of Economics and Social Studies, Central University of Venezuela, July 1993

Professional Appointments

Research Scientist Associate III, Bureau of Economic Geology, the University of Texas at Austin (September 2015-Present)

Energy Economist assisting in the design, implementation, and assessment of methodologies for energy pricing, cost analysis, and capital risks in the energy and rural development sectors.
Performing research on different CO_2 injection scenarios for EOR, including economic sensitivity analysis on key input variables such as oil and CO_2 prices, capital expenditures, operational expenses, etc. Participating in the development of a methodology for CO_2-EOR sustainability by integrating the geoengineering of EOR with environmental and social-economics performances. Assisting in the development of sustainable strategies conducive to lowering the carbon balance of Carbon Capture, Utilization, and Storage (CCUS) ecosystems. Active work in publications, reports, and presentations to technical audiences. Sustainable Carbon Management and energy transition technologies.

Most Relevant CCUS Projects:

Gulf of Mexico Regional Carbon Sequestration Partnership/ Southeast Regional CO_2 Utilization and Storage Acceleration Partnership (GomCarb/SECARB:): Ongoing projects funded by U.S. DOE. Assisting to address the CO2 transport and delivery options in the GoM including assessments of (a) existing infrastructure (e.g., pipelines, platforms, and wells) and how such infrastructure assessment may inform storage reservoir identification and evaluation; (b) logistical and regulatory obstacles to CO2 transport and delivery to offshore targets; (c) process and requirements of decommissioning and whether/how to re-purpose for large-scale offshore CO2 storage in the GoM. Collaborating to document scenarios/processes to optimize field operations, reservoir response, and operations costs for efficient storage and monitoring of CO2. Also collaborating in public engagement and knowledge dissemination via presentations and publications designed specifically for technical audiences, regulatory personnel, or the general public.

CCUS Societal Consideration and Impacts: applying different tools and developing novel methodologies to identify and characterize Disadvantage Communities potentially impacted by CCUS projects, particularly from the CO2 Storage perspective. Integrating the EPA's UIC Class VI Injection Well permit application guidances, NEPA's Environment Impact Statement, and different available screening tools to develop a novel methodology assessing groundwater and other environmental indicators impacting disadvantaged, low-income, and minority populations within the Area of Review of CCUS projects.

Carbon Balance of CO2-EOR for Net Carbon Negative Oil (NCNO) Classification: 3-yr project (1 year extended) funded by U.S. Department of Energy. Developing a clear, universal, repeatable methodology for making the determination of whether a CO2-EOR operation can be classified as Net Carbon Negative Oil (NCNO). The main focus is on creating a novel methodology to analyze the relationship between energy consumption, oil production, CO2

injection, GHG emissions, and storage oriented to achieve NCNO classification defining the operational environmental limits and energy-efficiency recommendations.

CCUS Sustainability: develop a novel methodology for Meso-level decision-making, integrating environmental and socio-economic performance of CO2-EOR operations linking the results of our Dynamic Life Cycle Analysis with the socio-economic optimum determined through Marginalist Economic Theory allowing to include externalities, incentives impact and different setups to the operation's sustainability

CarbonSafe: A 3-yr project funded by U.S. Department of Energy Carbon Storage Assurance Facility Enterprise (CarbonSAFE) initiative, seeks to help mitigate carbon dioxide (CO2) emissions from the burning of fossil fuels. Addressing key research gaps in the path toward the deployment of carbon capture and storage (CCS) technologies, including the development of commercial-scale (50+ million metric tons CO2) geologic storage sites for CO2 from industrial sources. Phase I of the project will provide a pre‑feasibility study for a commercial-scale geological storage site. Objectives include the formation of a CCS coordination team to address regulatory, legislative, technical, public policy, commercial, financial, and other issues specific to commercial scale deployment of the CO2 storage projects. The projects is developing a plan encompassing technical requirements, as well as both economic feasibility and public acceptance of an eventual storage project near-offshore storage complex on the inner shelf of the Gulf of Mexico.

Getting-to-Neutral: Initial Considerations for Large-Scale Carbon Removal in the United States: Description of Methods, Feedstocks, and Constraints, Lawrence Livermore National Laboratory, LLNL. The first economy-wide technical evaluation of the options for achieving carbon dioxide removal (CDR) goal (1Gt/y), evaluating feasibility, performance, and costs on a county level for the entire USA, considering all removal methods that are currently well-enough developed.

Entrepreneurship on Sustainability:

Founder and General Director, Ser Sustentable C.A, Venezuela (July 2012-Agost 2015)

Head of energy economics firm that provides consulting services on environmentally sustainable operations, energy management, and efficient use of renewable resources. Cost-effective mid and long-term proposals for changes to and improvement on preventive and corrective maintenance program, system start-up procedures, and capital investment and expenditure plans. Results include 15% average increase on existing internal electric network capacity, and over 22% average savings in power consumption. Ongoing and completed projects to date include:

Waste management:

Integral Systems Solid Waste Management (based on ISO 14001 and national regulations): Project developed for the Acosta Municipality, Monagas state (area under special environmental administration by the Venezuelan national government). Population of around 18,500 inhabitants. Review and redesign of solid waste management procedures, including the adoption of a new waste classification system and primary recycling activities. (2014)

Energy efficiency:

Energy Management System (based on ISO 50001) for the Prof. Jose L. Perez Technical High School: Diagnostic and adjustment of the electric supply system.

Water Pumps Efficiency Diagnostic for Agua Azul Theme Park (Water Park, 3.000 visitors per day in high season) in Margarita, Nueva Esparta state, Venezuela.

Clean energy and emissions management:

Photovoltaic Pumping Systems for the Tamayo Foundation: Pumping and treatment of sewage, and collection of rainwater for greenhouse irrigation (2014).

Bio-digesters for Pork Farms (PLUMROSE and AGROPORK), for the collection and use of methane gas for electric power and cooking (2012).

Photovoltaic power system for an INFOCENTRO at El Paují: Community library and Internet satellite connection at a small hamlet (population 450 inhabitants, including indigenous groups living in surrounding areas), located 1,500 km south of Caracas, Bolívar state, at the border of the Brazilian Amazon jungle.

Professor of Practice, Universidad Nacional Experimental Romulo Gallegos (UNERG), Venezuela (December 2006-August 2015):
Curricular and course design for the university's different majors in Economics, based on knowledge emerging from my professional practice and research. Development and supervision of applied community projects on infrastructure and utilities, covering project inception and design, fund sourcing, project development, and implementation, training, and operation management.
Applied research: Design and implementation (pilot phase) of a national plan for energy management for public universities (2013); ongoing design, coordination, and assessment of the university's community service projects, with a focus on local development, and industrial and commercial entrepreneurship.
Courses designed and taught: Economics I (microeconomics), Economics II (macroeconomics - Curricular Coordinator), Economics and Politics of the Agricultural Sector (Curricular Coordinator), Community-Based Projects (service learning), and entrepreneurship: Economic Feasibility Analysis.

Thesis Supervision (Main Academic Advisor): Roldan, F., and Acua, N. (2014). MERCOSUR: Comparative Analysis of Its Agriculture Sector, 2010-2014 (B.S. Economics). Luzon, L. (2014). Socio-economic Impact Analysis of Handmade Furniture Shops in Magdaleno, Aragua State, (B.S. Economics).

Personal Financial Consultant, Cinetica Financial Services, Venezuela -- USA (September 2006-August 2015)
Provide customized investment solutions involving international mutual funds, personal insurance, and individual assets protection.
Certified representative for: Investors Trust: code 507377, Best Meridian Insurance (BMI): code 10175, Manhattan Insurance Group: code 54RR107, Best Doctors: code BDDVZRR026

Adjunct Faculty, Universidad Central de Venezuela (UCV), School of Political and Administrative Sciences, Caracas, Venezuela (2005-2006)
Courses designed and taught: Political Economy IV, Special Topics Seminar: Agricultural Policy and Food Security in Venezuela (in line with paradigm of sustainable development)
Head of APROSIGUA's Operational and Financial Rescue Team, APROSIGUA (Association of Farmers in the Guárico River Irrigation System) - Calabozo, Venezuela (1999-2004)
Chaired and coordinated activities of a multidisciplinary team created to reactivate and expand the oldest trade association in the region. As a result of my leadership, the association achieved, after 15 years of stagnation, registration and/or readmission of 300 members in less than 2 years. Among other accomplishments of the team I chaired are access to new financing for the cultivation of more than 3,000 hectares, drilling of 90 deep wells for irrigation, and purchase 30 tractors and agricultural implements for association members

Lecturer, Instituto Universitario de Tecnología de los Llanos (IUTLL), Venezuela (1998-2004)
Courses taught:
Economic Theory I (microeconomics),
Agricultural Planning and Administration,
Agricultural Projects

Founding Member and Independent Operator, Bolpriaven (Venezuelan Stock Market Exchange for Agricultural Commodities) - Caracas, Venezuela (1999-2002)
Transacted Certificates of Deposit, agricultural certificates, future options, rediscounts, and purchase/sale of positions in this private market exchange organization aimed at promoting transparency in price determination for the Venezuelan agricultural sector. Member of the
Arbitrage Unit of the Chamber of Commerce in Caracas (Agriculture Team), dedicated to providing mediation in conflict resolution for actions related to operations of Bolpriaven.

Adjunct Faculty, Colegio Universitario de Administracion y Mercadeo (CUAM) -- Calabozo, Venezuela. (1997-1999)
Courses taught: Analysis and Management of Capital Investment

Energy Economics Consultant, Independent (1995-1997)
Provided analysis of costs and tariffs for several Venezuelan power-supply companies. Development of plans for the implementation of the Uniform Code of Accounts for Tariff Filing and Calculation for Venezuelan regional electric power companies (EDELCA, ELEBOL, CALIFE, and CADAFE) and their governmental regulatory body. Performed ad-hoc studies involving cost control, consumer profiling, and pricing estimation for energy companies with a variety of ownership regimes, supply chains, distribution networks, and demand structures. Adaptation of electric distribution companies' general accounting systems to the Venezuelan regulatory agencies' standardized accounting coding, based on functional cost centers, to comply with mandated operative efficiency and service quality levels. Scenario simulation and sensitivity analysis based on key variables (fixed assets, labor costs, energy, and oil prices, inflation and exchange rates, demand scenarios, and others) aimed at determining and meeting profitability goals

Researcher, Project Leader, and General Manager (successively), CONSORCIO CS, C.A. (ASINCRO and IMPROMAN, VBL) - Caracas, Venezuela (1987-1995)
A company specialized in consulting services in the area of pricing studies for public utilities, especially water and electric supply. Position involved service-cost analysis including the design and application of customized marginal and average cost methodologies, which resulted in cost allocation and tariff design for nationwide electricity generation and distribution companies in Venezuela. Developed economic viability analyses. Planned and supervised operative and administrative control of projects. Elaborated final reports for clients. Represented the firm at the National Advisory Team for the design and application of a standard pricing model for the electric power Industry in Venezuela, based on marginal-costs analysis (methodology promoted by the World Bank through its Program of Action for Macroeconomic Stabilization). Coordinated studies of costs and tariffs for subsidiary companies and end-users of the then-largest electric power distributor in Venezuela, CADAFE.
Junior Economist (paid internship), Lagoven (a subsidiary of the state-run oil company Petróleos de Venezuela [PDVSA]) - Caracas, Venezuela (1987). Temporary staff member at Lagoven's Billing and Costs Control Office

Theses
Marginal Costs Theory Applied to the Electric Power Sector: A Proposal for Venezuela, Central University of Venezuela, 1993.

Continuing Education Courses Taken
- Photovoltaic Systems: Basic and Advanced Equipment: Organized by Arca de NOE 2312 / Venezuelan Association of Engineers, Caracas, Venezuela, September 2015
- Basics of Carbon Capture and Sequestration: Research and Experience in Carbon Sequestration Program, Southern Company, Birmingham, Alabama, August 6-20, 2015
- Statistical Analysis with INFOSAT: National Institute for Agricultural Research, Calabozo, Guárico state, Venezuela, July 2005
- Holistic Pedagogical Management in the Classroom: Endogenous Development: Instituto Universitario de Tecnología de los Llanos and Institute for Human Integral Development, Valle de la Pascua, Guárico state, Venezuela., May 2005
- Planning, Design, and Evaluation of Agricultural Projects: Instituto Universitario de Tecnología de los Llanos and Venezuelan Association of Agricultural Experts, Calabozo, Guárico state, Venezuela, March 2004
- Management of Silos and Agricultural Storage Facilities: Venezuelan Agency for Commodities Exchange and Agricultural Inputs (BOLPRIAVEN) and the National Center for Research on Experimental Agricultural and Industrial Production (CIEPE), San Felipe, Yaracuy state Venezuela, June 2002
- Negotiation Theory and Tools: The Harvard Negotiation Model: CMI International and the Center for Quality and Productivity of Carabobo State, Valencia, Carabobo state, Venezuela, July 2001

- International Agricultural Trade: Spanish Agency of Cooperation for International Development, and the Universidad Central de Venezuela's Institute of Agricultural Economics, Caracas, Venezuela, September 2000
- Brokerage of Agricultural Commodities Exchange: Venezuelan Agency for Commodities Exchange and Agricultural Inputs (BOLPRIAVEN), the Inter-American Institute for Cooperation on Agriculture (IICA), the Hemispheric Training System for Agricultural Development (SIHICA), and the CIARA Foundation, Caracas, Venezuela, February 1999
- Analysis of Agricultural Networks and Food Policy in the Context of Globalization: Hemispheric Training System for Agricultural Development (SIHICA), the Inter-American Institute for Cooperation on Agriculture (IICA), and the CIARA Foundation, Caracas, Venezuela, September 1998
- Financing of Utilities and Public Services: Electricity Company of Caracas (EDC) and the Institute of Advanced Studies in Administration and Management Studies (IESA), Caracas, Venezuela, October 1995
- Government Reform and the Role of Public Services Administration: the Electricity Company of Caracas (EDC) and the Institute of Advanced Studies in Administration and Management Studies (IESA), Caracas, Venezuela, May 1995
- Customs Law: Organized by the Venezuela Bank of Foreign Trade (BANCOEX) and the Venezuelan Ministry of Production and Commerce, Caracas, Venezuela, October 2001-Present Incursion into New International Markets: Venezuela Bank of Foreign Trade (BANCOEX) and the Venezuelan Ministry of Production and Commerce, Caracas, Venezuela

Areas of Expertise

- Carbon Management Sustainability
- Economics and Energy Consumption of CO2-Enhanced Oil Recovery, Surface Operations
- Energy transition economics (CCUS, Hydrogen economy)
- CCUS' Societal Considerations (Environmental Justice, Justice40, DEIA, Job Creation, etc.)
- Low-carbon ecosystems (Gulf of Mexico)
- Energy Efficiency
- Higher Education
- Project Management
- Sustainable Solutions

Committees and Panels Participation

- Chair at IEA-GHGT-16 Conference 2022, for: Session 6G - Regulatory Experiences USA and Session 11E - Wellbore and leakage modellingLyon France

- Liaison leader between the Bureau of Economic Geology, the University of Houston's Center for Carbon Management in Energy (UHCCME), and the Southern States Energy Board (SSEB) CCUS Commercialization Consortium. The Consortium is comprised of subject matter experts from over 50 companies and organizations, including the four DOE-funded Regional Initiatives. Its main goal is the commercial-scale deployment of CCUS technologies. Houston TX, since February 2020.

- Liaison leader between the Bureau of Economic Geology and Baker Hughes-General Electric (potential sponsor). Seminar and exploratory meeting on potential areas of collaboration with program coordinators (TORA, CEE, GCCC, and UT EI). Bureau of Economic Geology., Austin TX, December 2019

- Panelist on the BHP Petroleum ESG Month, E & Tea Panel – Session: The Path Forward for Decarbonization, getting to net-zero and the role of Critical Tech-CCS- in the energy transition. BHP Petroleum Houston Headquarters, March 2022.

External Committees Participation

Deputy Representative of Venezuela at the Rice Advisory Committee, Committee created by the Council of Agriculture Ministers of the member countries of CAN (Decision No. 445), Comunidad Andina de Naciones (CAN) [Andean Community of Nations], Recommendations for the consolidation of the rice market in the Andean zone and for the improvement of the supply chain for that commodity in South America, Lima, Perú, October 1999

Awards

Bureau First Author Publication Awards 2020 (Tinker Family BEG Publication Award).
The highlight: "given in recognition of an exemplary publication of demonstrated or expected scientific or economic impact, or that otherwise increases the visibility of the Bureau scientific community."
Awarded research: "Environmental and operational performance of CO_2-EOR as a CCUS technology: a Cranfield example with dynamic LCA considerations".

Presentations

Invited Presentations

- *Environmental Justice Screening Tools applied to CO2 Storage Projects (Lecture).* Energy and Earth Resources (EER) course at Jackson School of Geoscience (JSG) at University of Texas (UT) at Austin, March 2022.
- *BHP E&Tea Panel: The Path Forward for Decarbonization. Environmental & ESG Week.* Invited Panelists on the status of existing technologies that will help decarbonize our economy, Market divers, and barriers. BHP headquarters. Houston, March 2022
- *Impact of 45Q and Staked Storage in the sustainability of CO_2-EOR (particular oral presentations)*, Baker Hughes-General Electric, and Shell. Houston, TX, September 2019.
- *The professional education of sustainability-conscious economists: Challenges and opportunities: presented to National Meeting of Economics Students (ENEE)*, presented at Panel on Sustainability and Climate Change Forum (Chair), San Juan de Los Morros, Guárico state, Venezuela, September 2014.
- *Liability of cost structure for the subsidiaries of the National Electricity Company CADAFE: presented at Calculation of Energy Sales Price: CADAFE Charges to Its Subsidiaries, Regional Locations Workshop*s: Valencia, Carabobo state; Valera, Trujillo state; and Cumana, Sucre state, Venezuela, 1993.
- *Characterization of electricity consumption by regions and types of clients: presented at Workshop: Calculation of the New Specification Fee for End-Users of the National Electricity Company (CADAFE)*, Caraballeda, Vargas state, Venezuela, 1991.
- *Marginal electricity costs in context: Methodological review of the cases of Brazil, Chile and France:* presented to the Venezuelan Ministry of Energy and Mines (MEM), and by the Electricity of the Caroní Region Company (EDELCA), presented at Forum: Marginal Costs, Operating Costs, and System Expansion in the Venezuelan Electricity Sector, Caracas, Venezuela, 1990.

Presentations

- *CCS-CCS – Community Benefit Plan: enabling business in the Gulf of Mexico (poster).* DOE/NETL GoMCARB/SECARB Annual Technical Review Meeting. UT-BEG-GCCC, UT Prickle Research Campus, Austin Texas, Abril 2023.
- *Societal Considerations and Impacts of CCUS projects (poster)*, Public Engagement workshop Department of Energy-Harte Research institute For the Gulf of Mexico, Corpus Christi, TX, November 2022.
- *Societal Considerations and Impacts Risk Assessment on CCS Class VI Well Permit Applications,* BEG Symposium 2022, Austin TX, September 2022.
- *CCS' Environmental Justice, Storage perspective (poster).* DOE-NETL Annual Technical Report 2022 Meeting. Philadelphia, Pennsylvania, August 2022
- *Environmental Justice considerations on CCS projects (poster).* AAPG CCUS 2022 Conference. UH Hilton, Houston March 2022

- *First approach to Environmental Justice considerations on Class VI Injection Well permit applications (oral presentation, online),* Bureau of Economic Geology – Gulf Coat Carbon Center Biannual Sponsors Meeting, Bureau of Economic Geology, September 2021, Austin, TX.
- *Impact of 45Q and Staked Storage in the sustainability of CO_2-EOR (oral presentations)*, Texas' Groundwater Protection Council, 2020 UIC Conference, February 2020. San Antonio, Texas
- *Impact of 45Q and Staked Storage in the sustainability of CO2-EOR (oral presentations*), Bureau of Economic Geology Biannual Sponsors Meeting-UTCCS-5, January 2020. Austin, TX
- *The sustainability of CCUS technologies: CO_2-EOR case of study (oral presentation)*. World Congress on Oil and Gas, Valencia, Spain, October 2019
- *Impact of 45Q and Staked Storage in the sustainability of CO_2-EOR (poster).* 2nd Energy@UT Research Expo. AT&T Conference Center, Austin, Texas, October 2019.
- *Impact of 45Q and Staked Storage in the sustainability of CO_2-EOR (nano-talk and poster)*. 7th Annual Bureau Research Symposium. Bureau of Economic Geology. Austin TX, September 2019.
- *Impact of 45Q and Staked Storage in the sustainability of CO_2-EOR (poster)*, Bureau of Economic Geology Biannual Sponsors Meeting, August 2019, Houston, TX
- *Is CO2-EOR Sustainable? (oral presentation).* Bureau of Economic Geology Biannual Sponsors Meeting, Austin TX. January 2019.
- *A Sustainable Approach to Decision-Making in CCUS Systems (oral presentation).* International Energy Agency, GHGT-14 conference, Melbourne, Australia, October 2018
- *Carbon Life Cycle Analysis of CO2-EOR for Net Carbon Negative Oil (NCNO) Classification (DE-FE0024433),* 2018 NETL CO2 Capture Technology Project Review Meeting, Pittsburgh, Pennsylvania, August 2018.
- *CCUS Ecosystem. A new conceptualization of the CCUS landscape. The role of economics studies underway and planned (them 1)* and, *The "U" in CCUS, Unconventional EOR (them 4, complement presentation)*, Bureau of Economic Geology Biannual Sponsors Meeting (Big Plan 2018-2022 presentation), Bureau of Economic Geology, September 2017, Houston, TX
- *Lifecycle Analysis of CO2-EOR for Net Carbon Negative Oil Classification Cranfield case (poster).* 2018 Internal Update on ExxonMobil LRRM and next steps, AT&T Conference Center, Austin, Texas, May 2018.
- *A new conceptualization of the CCUS landscape, the role of economics studies underway and planned (them A, retrospective 2014 – 2018) and The NCNO project Update (them C, retrospective 2014 – 2018)*. Bureau of Economic Geology Biannual Sponsors Meeting (Big Plan 2018-2022 proposal), Bureau of Economic Geology, January 2017, Austin, TX
- *A Sustainable Approach to Decision-Making in CCUS Systems* (poster). 6th Annual Bureau Research Symposium, Bureau of Economic Geology, September 2018, Austin, TX.
- *CO2-EOR, an option for Green Oil? Approaching an NCNO Classification*, (presentation), Biannual Bureau of Economic Geology Sponsors Meeting, Bureau of Economic Geology, September 2017, Houston, TX.
- *CO2-EOR, an option for Green Oil? Approaching an NCNO Classification* (poster). 5th Annual Bureau Research Symposium, Bureau of Economic Geology, September 2017, Austin, TX
- *Matching Environmental and Economic Performance of CCUS systems: an approach to a decision-making methodology for sustainable developmen*t, (presentation), Carbon Management Technology Conference (CMTC) 2017 Conference, Houston TX., May, 2017
- *Carbon balance of CO2-EOR for NCNO classification* (poster): presented to 4th Annual Bureau Research Symposium, Bureau of Economic Geology, Austin, Tex., September 2016.
- *Analysis of CO2-EOR operations: An approach to its main variables and uncertainty parameters*, (presentation) to GCCC Staff Seminars, Gulf Coast Carbon Center, Bureau of Economic Geology, Austin, Tex., May 2016.
- *A study of comparative advantages of irrigated rice production in Venezuela,* presented at Latin American Economic Network of Rice Production Forum: Methodological Design, Cases and Prospects for the Region, Porto Alegre, Brazil, November 1999.
- *Conceptual implications of the theory of marginal cost applied to the electricity sector: presented to Venezuelan Association of Engineers and Venezuelan Association of Electrical and*

- *Mechanical Engineers,* (presentation) at Congress of Electricity Generation and Distribution, Porlamar, Nueva Esparta state, Venezuela, November 1988.
- *Study of the national market for the industrial subsector of oil valves, (*presented) to School of Economics, Universidad Central de Venezuela, presented at Student Research Conference: Industrial Projects, Caracas, Venezuela, May 1985.

Funding Research Support

Program Leader: Conceptual and Methodological Proposal for the Implementation of a Comprehensive Solid Waste Management Program, the Urban Development Office of the Acosta Municipality, Monagas state, Venezuela (August 2014-May 2015).

Chief Coordinator: Proposal for an Energy Management Plan for Public Universities in Venezuela (Competitively selected by the Dean of Research, Universidad Nacional Experimental Rómulo Gallegos [UNERG]), The Universidad Nacional Experimental Rómulo Gallegos (UNERG). San Juan de los Morros, Guárico state, Venezuela (March 2013-May 2015).

Publications

Peer review

- Nuñez-López, V., Gil-Egui, R., Hosseini, S. A.: *Environmental and Operational Performance of CO2-EOR as a CCUS Technology: A Cranfield Example with Dynamic LCA Considerations.* Energies Journal's special issue, ID energies-412775. December 2018, 27p. (cited on the IPPC 6th report on Climate Change Mitigation Options, March 2022-Working Group III)

Non-peer rewiew

- J. Pett-Ridge, M. Ashton, S. E. Baker, B. Basso, M. Bradford, H. Breunig, A. Bump, I. Busch, E. Rodriguez Calzado, J.W. Chirigotis, M. Ducey, J. Dumortier, N. C. Ellebracht, R. Gil Egui, A. Fowler, K. Georgiou, H. Goldstein, D. Hayes, C. Hellwinckel, S. Hovorka, E. Hunter-Sellars, W. Kirkendall, S. Kuebbing, P. Lamers, M. Langholtz, M. Layer, R. Lewis, W. Li, A. Mayer, K. K. Mayfield, P. Nico, S. H. Pang, K. Paustian, G. Peridas, H. Pilorge, S. Ponomareva, L. Price, P. Psarras, P. Robertson, J. W. Sagues, D. Sanchez, C. Scown, B. M. Schmidt, E. W. Slessarev, A. J. Stanley, A. Swan, C. Toureene, A. A. Wong, E. Woods, M. M. Wright, Y. Zhang, R. D. Aines, Initial Considerations for Large-Scale Carbon Removal in the United States: Description of Methods, Feedstocks, and Constraints, 2022, Lawrence Livermore National Laboratory, LLNL-TR-832805-DRAFT, 50p
- Gil-Egui, R., Nuñez-López, V., (2018), *A Sustainable Approach to Decision-Making in CCUS Systems.*14th International Energy Agency, GHGT-14 conference, Melbourne, Australia, October 2018.
- Nuñez-López, V., Gil-Egui, R. (2018). *CO2-EOR and GCS co-optimization with carbon lifecycle analysis considerations*, 14th International Conference on Greenhouse Gas Control Technologies. Melburn, Australia, October 2018.
- Nuñez-López, V., Gil-Egui, R., Gonzalez, A, Hosseini, S. A., Hovorka Carbon. (2018). *Life Cycle Analysis of CO2 -EOR for Net Carbon Negative Oil (NCNO) Classification* 2018 NETL Mastering the Subsurface through Technology Innovation, Partnerships and Collaboration: Carbon Storage and Oil and Natural Gas Technologies review meeting. Pittsburgh August 2018

Conference Proceedings Volumes

- Chen, Y., Lee, N., Gil-Egui, R. (2020). *True cost to market for Blue Hydrogen for Europe vs North America (submitted abstract accepted).* The 43rd IAEE International Conference. the Palais des Congrès Paris, France, at 21 – 24 June 2020
- Chen, Y., Lee, N., Gil-Egui, R. (2020). *Scenario planning of hydrogen integration with Gas infrastructure system for Europe* (submitted abstract accepted). The 43rd IAEE International Conference. the Palais des Congrès Paris, France, at 21 – 24 June 2020

- Chen, Y., Lee, N., Gil-Egui, R. (2020). *Become a serial winner, how to replicate H-2 vision in Netherlands elsewhere in the world?* (submitted abstract accepted). The 43rd IAEE International Conference. the Palais des Congrès Paris, France, at 21 – 24 June 2020
- Gil-Egui, R., Nuñez-López, V., (2019). *The sustainability of CCUS technologies: CO2-EOR case of study (oral presentation)*. World Congress on Oil and Gas, Valencia, Spain, October, 2019
- Gil-Egui, R., Nuñez-López, V., (2018), *A Sustainable Approach to Decision-Making in CCUS Systems.*14th International Energy Agency, GHGT-14 conference, Melbourne, Australia, October 2018.
- Nuñez-López, V., Gil-Egui, R. *CO2-EOR and GCS co-optimization with carbon lifecycle analysis considerations*, 14th International Conference on Greenhouse Gas Control Technologies, , Melburn, Australia, October 2018.
- Nuñez-López, V., Gil-Egui, R., Gonzalez, A, Hosseini, S. A., and Hovorka Carbon Life Cycle Analysis of CO2 -EOR for Net Carbon Negative Oil (NCNO) Classification 2018 NETL Mastering the Subsurface through Technology Innovation, Partnerships and Collaboration: Carbon Storage and Oil and Natural Gas Technologies review meeting. Pittsburgh August 2018
- Gil-Egui, R., Nuñez-López, V., 2017, *Matching Environmental and Economic Performance of CCUS systems: an approach to a decision-making methodology for sustainable development*, Carbon Management Technology Conference (CMTC) 2017 Conference, Houston TX, 2017.
- Nuñez-López, V., Gil-Egui, R., Gonzalez, A, Hosseini, S. A., and Hovorka, S. D., 2016*, Carbon balance of CO2-EOR for NCNO classification*, 13th International Conference on Greenhouse Gas Control Technologies, GHGT-1314-18, Lausanne, Switzerland.

Contract Reports

- Gil-Egui, R, Bakhshian, S., and Ringe, D. (2023), Final Report: Conceptual Life Cycle Analysis (LCA) of Oyster Bayou CO2-EOR Operations (Denbury, LLC.). Independent Consulting service requested by Mitsui E&P USA LLC (MEPUSA). Submitted to Japan's Organization for Metals and Energy Security (JOGMEC). March 2023.
- Hovorka, S., Gil-Egui, R., 2022, Engineering Scale Testing from Coal and Natural Gas-based Flue Gas and Initial Engineering Design for Industrial Sources. Identifying a plausible set of transport and storage options for this facility, targeting regional storage resources in the Mt Simon Formation. Dastur-Burns Harbor, Arcelor Mittal, and Dastur International, Contract report, Inc. OSP #: 202002800.
- Nicot, J.-P., Hosseini, S. A., Dashtian, H., Kamali, A., Romanak, K. D., Darvari, R., and Gil-Egui, R., 2019, *Headspace gas monitoring to infer dissolved gas concentrations at the Glenhaven Site (QLD):* prepared for Australian National Low Emissions Coal Research & Development (ANLEC R&D), Canberra, Australia, 94 p.
- Nuñez-López, Vanessa; Gil-Egui, Ramon; Hosseininoosheri, Pooneh; Hovorka, Susan D.; Lake, Larry W. (2019). FINAL REPORT: *Carbon Life Cycle Analysis of CO2-EOR for Net Carbon Negative Oil (NCNO) Classification*. Work performed under agreement DE-FE0024433, submitted to U.S. Department of Energy. National Energy Technology Laboratory, Mary Sullivan – Federal Project Manager (412) 386-7484 (mary.sullivan@netl.doe.gov), April 2019.
- Gil-Egui, R*,* Hovorka, S., Tutton, P., Prentice, S., Fifariz, R., Omar, R., Treviño, R., Meckel, T. (2018), *Linking CO_2 capture at source industries to storage in sediments in the nearshore Gulf of Mexico – case study of the CO_2 and energy ecosystem of the upper Texas coast,* CarbonSAFE *Phase I: Integrated CCS Pre-Feasibility – Northwest Gulf of Mexico*, FINAL RESEARCH PERFORMANCE PROGRESS REPORT*,* DE-FE 0029487. Austin, TX. 68 p.
- Nuñez-Lopez, V., Hosseini S. and, Gil-Egui, R. A. 2017 Interim report to DOE: *Performance Model for CO2 Storage System. As part of the project: Carbon Life Cycle Analysis of CO2-EOR for Net Carbon Negative Oil (NCNO) Classification*, July 2017, Austin, TX, 60 p
- Nuñez-Lopez, V., Hosseini S. and, Gil-Egui, R. A. 2017, Milestone Report: *Reservoir Mass Accounting Methodology. As part of the project: Carbon Life Cycle Analysis of CO2-EOR for Net Carbon Negative Oil (NCNO) Classification*, December 2016, Austin, TX, 18 p

- Nuñez-López, V., Gil-Egui, R., and Gonzalez, A, 2015, *Identification of Critical Energy Intensive Components and Project Framework*: Interim Report prepared for DOE-NETL, under contract no. DE-FE0024433, 12 p.

Published Reports

- Mendez-Arocha, A, and Gil-Egui, R., 1990, Marginal costs in the Venezuelan electric power sector: A methodological framework proposed by the World Bank: 256 p.

Published Abstracts

- Gil-Egui, R., Nuñez-López, V., (2017), Matching Environmental and Economic Performance of CCUS systems: an approach to a decision-making methodology for sustainable development, Carbon Management Technology Conference (CMTC) 2017 Conference, Houston TX., May, 2017
- Nuñez-López, V., Gil-Egui, R., Gonzalez, A., and Hovorka, S. D., 2016, Carbon balance of CO2-EOR for NCNO classification (abs.): 13th International Conference on Greenhouse Gas Control Technologies, Lausanne, Switzerland.
- Nuñez-López, V., Gil-Egui, R., and Hosseini, S. A., 2015, Validating CO2-EOR as a CCUS technology (abs.): Carbon Management Technology Conference: Sustainable and Economical CCUS Options, Sugar Land, TX.