



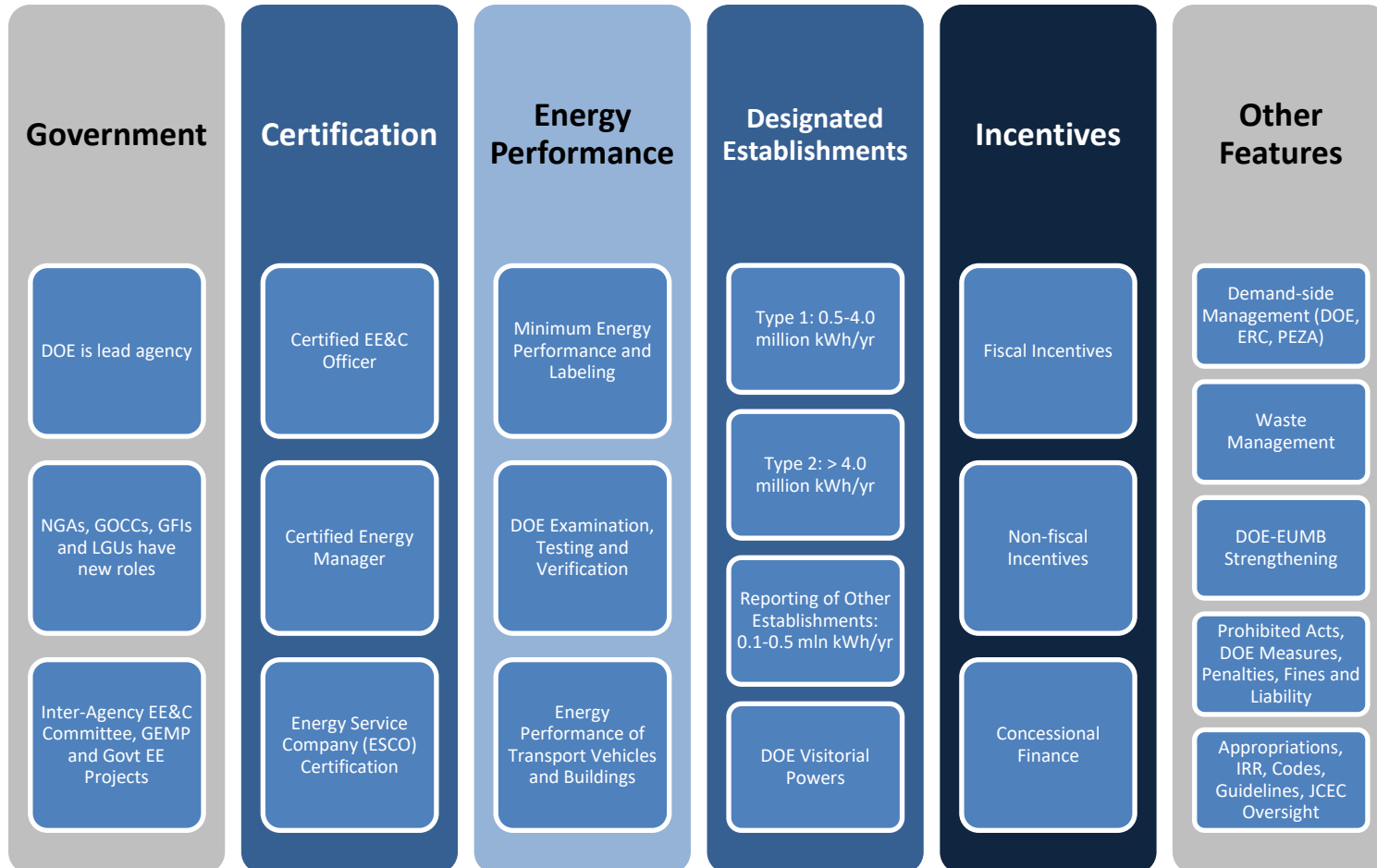
**cli·mar·gy** /'klīmərjē/  
*noun* 1. climate-smart energy.  
2. the innovative way of  
investing in energy efficiency  
measures outside the balance  
sheet of the end-user.

**Climargy**®

Driving Energy Efficiency Investments  
through a Pioneer Aggregator of ESCO  
Project Assets in the C&I Sector

*/ September 2022*

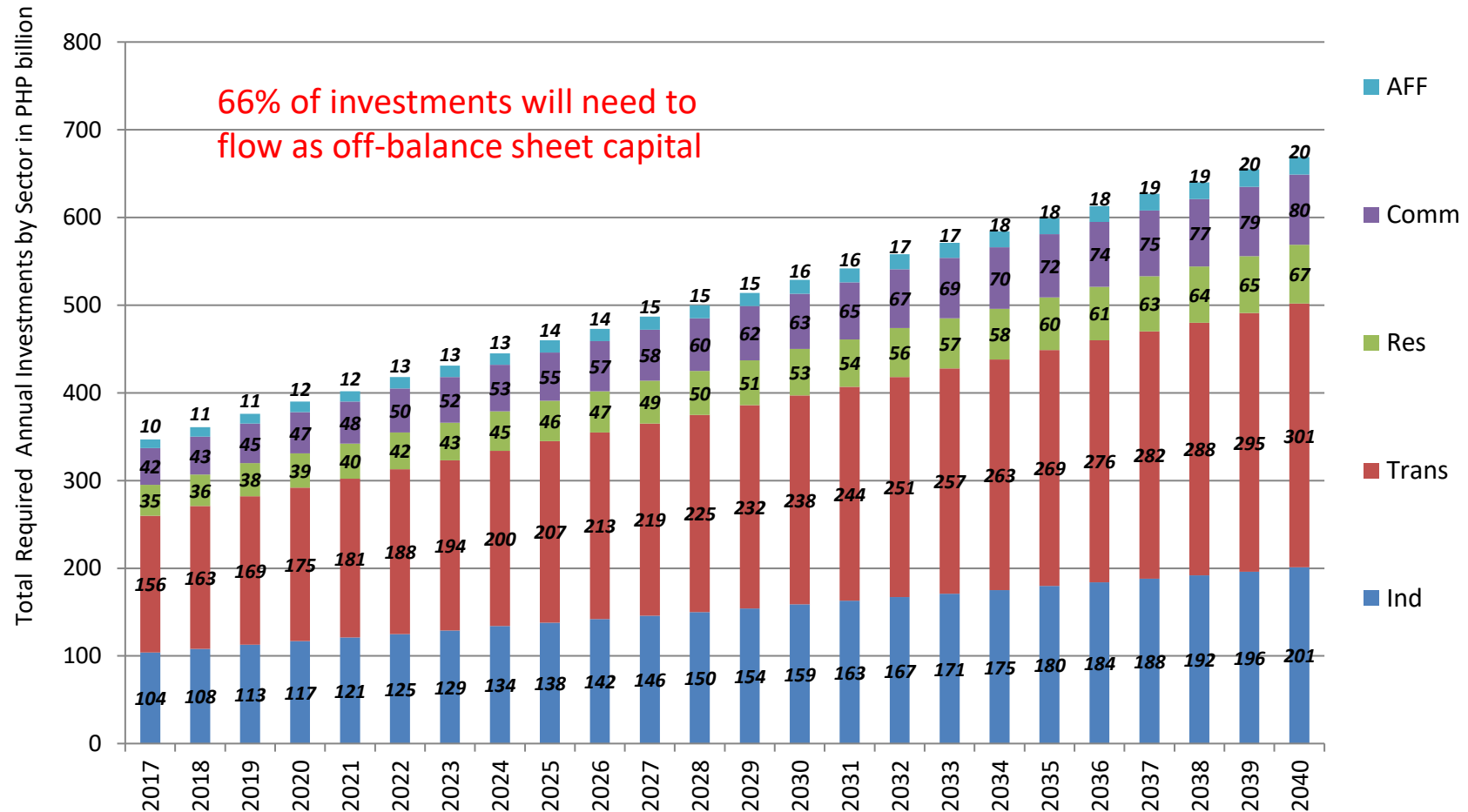
## The Philippines' Energy Efficiency & Conservation Law (RA 11285) sets obligations and enabling conditions across end-use sectors



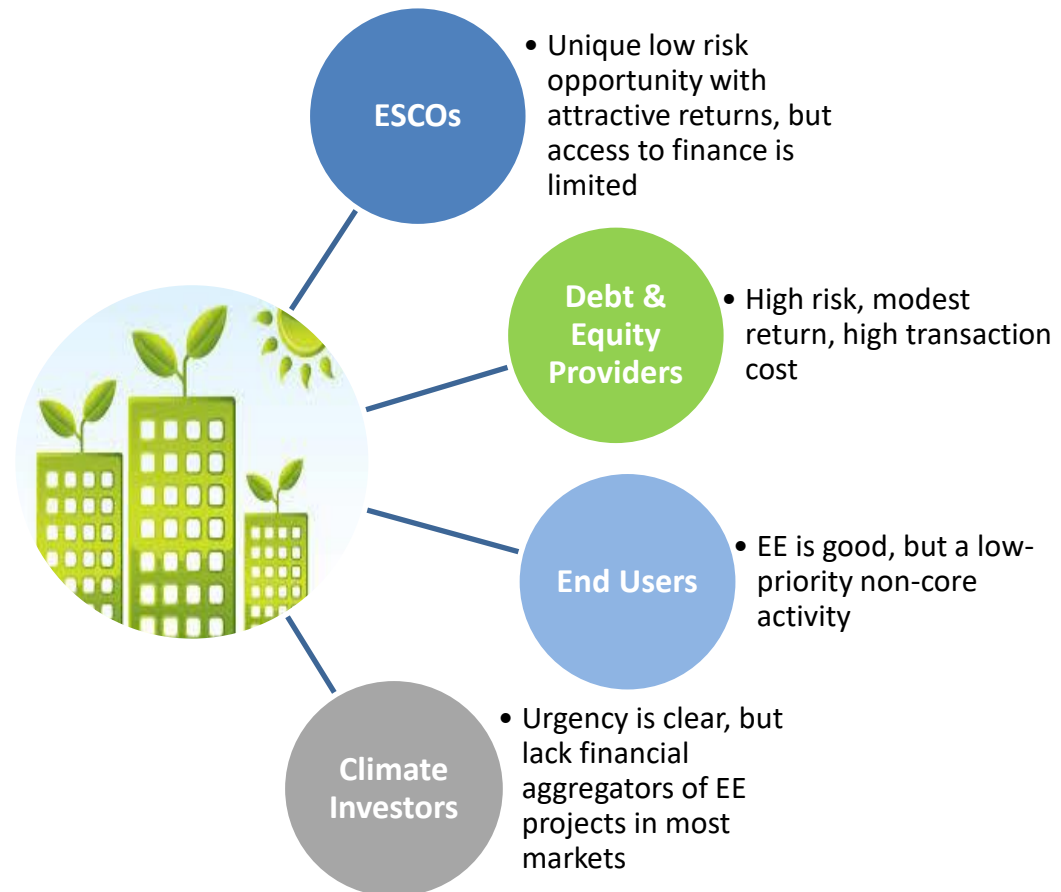
### Relevant features of the EE&C Law (partial):

- Fiscal Incentives through BOI
- Definition and Obligations of Designated Establishments:
  - Type 1 – Consuming 500,000-4,000,000 kWh per year
  - Type 2 – Consuming > 4,000,000 kWh per year
  - Employ a CECO or CEM from within organization or from external recruitment
  - EMS (ISO 50001 or similar framework)
  - keep energy records
  - set annual targets and programs (which may include self-use RE)
  - submit Annual Energy Consumption Report every April 15th
  - Energy Audit by certified Energy Auditor or accredited ESCO every 3 years, and
  - reduce Specific Energy Consumption (SEC)
- Other Establishments: 100,000 kWh to less than 500,000 kWh per year:
  - EMS (ISO 50001 or similar framework)
  - submit Annual Energy Consumption Report every April 15th

## Over USD 243 billion in investments will be required to reduce final energy demand by 182 Mtoe through 2040 in the Philippine market



## Market players see EE opportunities differently



## Why Climargy®? Addressing market failure for energy efficiency portfolio finance



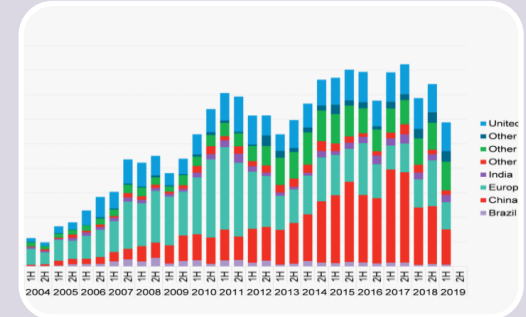
Up to 98% of energy service companies (ESCOs) across developing Asia do not have suitable access to bank lending (or equity capital) to pursue their long-term pipeline of ESCO-financed performance contracts.



No energy efficiency aggregators exist nor "fund-like" or "super-ESCO" equity providers of project capital exist as corporate structures across developing or emerging economies.



No entity is removing the barriers or de-risking the upfront project development costs (especially for investment-grade energy audits) for energy efficiency projects in the Philippines.



Private capital is moving at a steadily growing velocity toward 20,000 MW renewable energy projects, but sadly NOT toward the 45,900 MW potential energy efficiency improvements.

## Why Climargy®? Off-balance sheet project equity accelerates EE project decisions



### ESCOs

- Grow their performance contracting pipeline without worrying about credit limits or recapitalizing
- Focus on what they do best – deliver energy savings

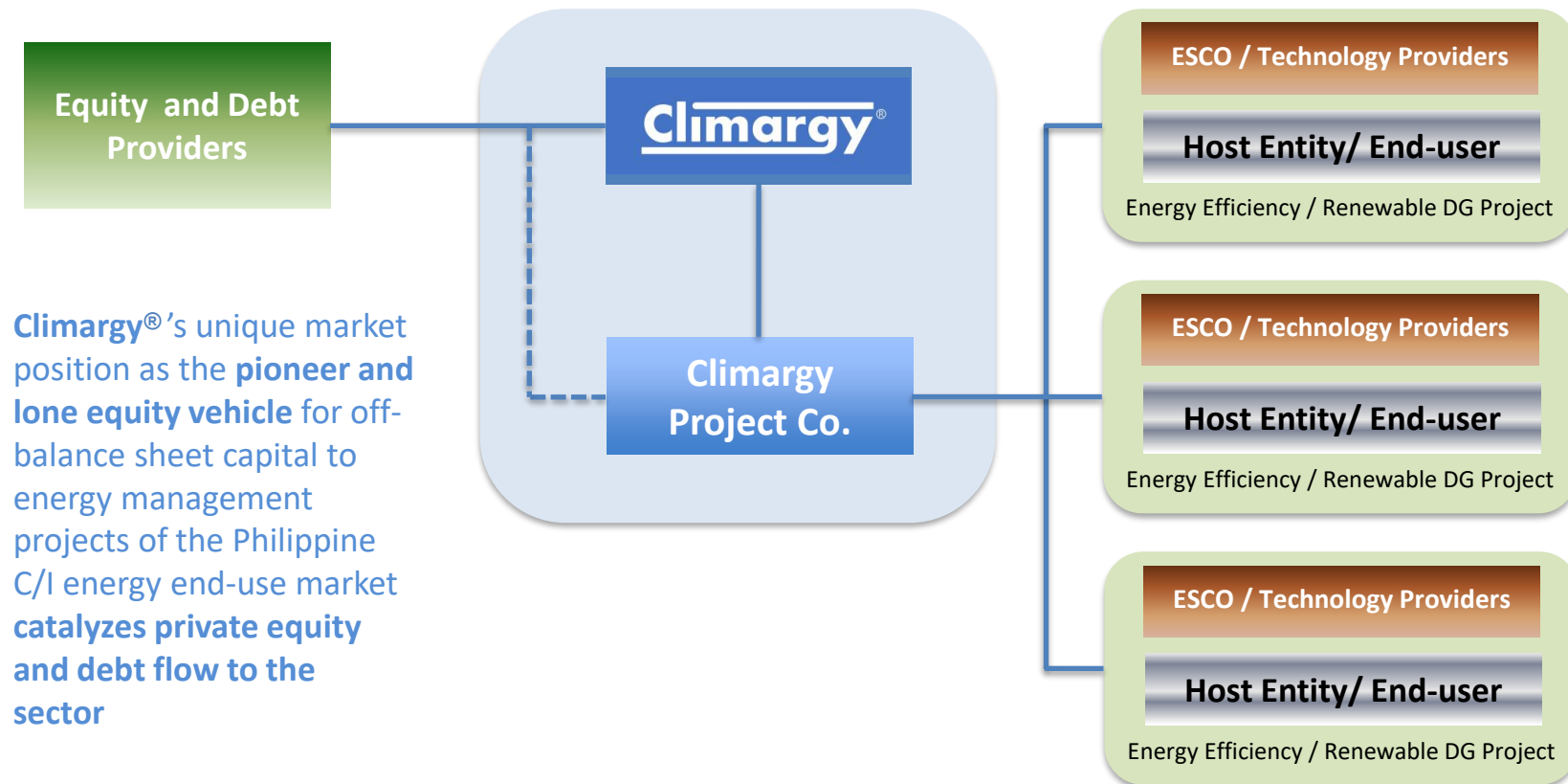


### Commercial and industrial building owners

- Preserve their capital budgets and credit lines for core business priorities
- Implement energy-saving projects without delay

## Additionality of portfolio investments

“Priming the pump” of capital flow to an asset class with limited access to project finance



Climargy®’s unique market position as the **pioneer and lone equity vehicle** for off-balance sheet capital to energy management projects of the Philippine C/I energy end-use market **catalyzes private equity and debt flow to the sector**

## Climargy® Portfolio Impacts of Initial Investment Tranche (target USD 108 million)



Up to 3 TWh avoided generation (energy savings at source) by 2040

Up to 300 GWh/yr annual avoided generation by 2031 (equivalent to 55 MW coal-fired plant)

Up to 2 GtCO<sub>2</sub>e GHG emission reduction by 2040

About 2,100-3,900 jobs created



## Target energy management projects in the commercial and industrial sectors



**Energy efficiency upgrades** implemented under **shared savings performance contracts**. Typical technologies and measures include HVAC/chiller retrofits, high efficiency motors, variable speed drives, pumps, compressed air systems, process efficiency improvements, LED relamping, building management systems, smart metering and controls, fuel switches and short-payback building envelope improvements.

**Distributed renewable generation and energy storage projects** implemented through **host energy-offtake agreements**. Typical technologies include rooftop solar PV, solar thermal cooling, district cooling, district heating and steam, waste heat recovery/organic rankine cycle, waste-to-energy, biomass-fired power and steam generation, thermal energy storage, battery energy storage systems.

## Sample Project: Chilled Water Plant Upgrade (1,500 TR) for High-Rise Office Building

**Annual Cooling Energy Delivery:** 7,500,000 TR-h/y (24 h/d, 7 d/w duty)

**Improvement of Chilled Water Plant Efficiency:** Reduce from 1.329 kW/TR (baseline) to 0.700 kW/TR (EE project)

**Annual Savings:** 4.82 GWh/yr, PHP 35.49 mln p.a. (electricity), PHP 2.82 mln p.a. (maintenance); 3.30 MtCO<sub>2</sub>/yr (GHG emission reduction)

**Project includes:** 2 units x 750 TR chillers, 4 chilled water pumps, 4 condenser water pumps, 12 variable frequency drives, 4 cooling towers, controls and energy management system, M&V system, condenser tube cleaning, disassembly and removal of existing equipment, site installation works

**Project CAPEX:** PHP 116.4 million (fully invested by Climargy, outside the balance sheets of ESCO and Building Owner)

**Monthly Repayments:** Fixed Fee of PHP 3.04 million/mo (VAT inclusive), calculated as 85% of combined energy+maintenance savings

**Contract Term:** 10-years      **Other Considerations:** ≥4-year income tax holiday

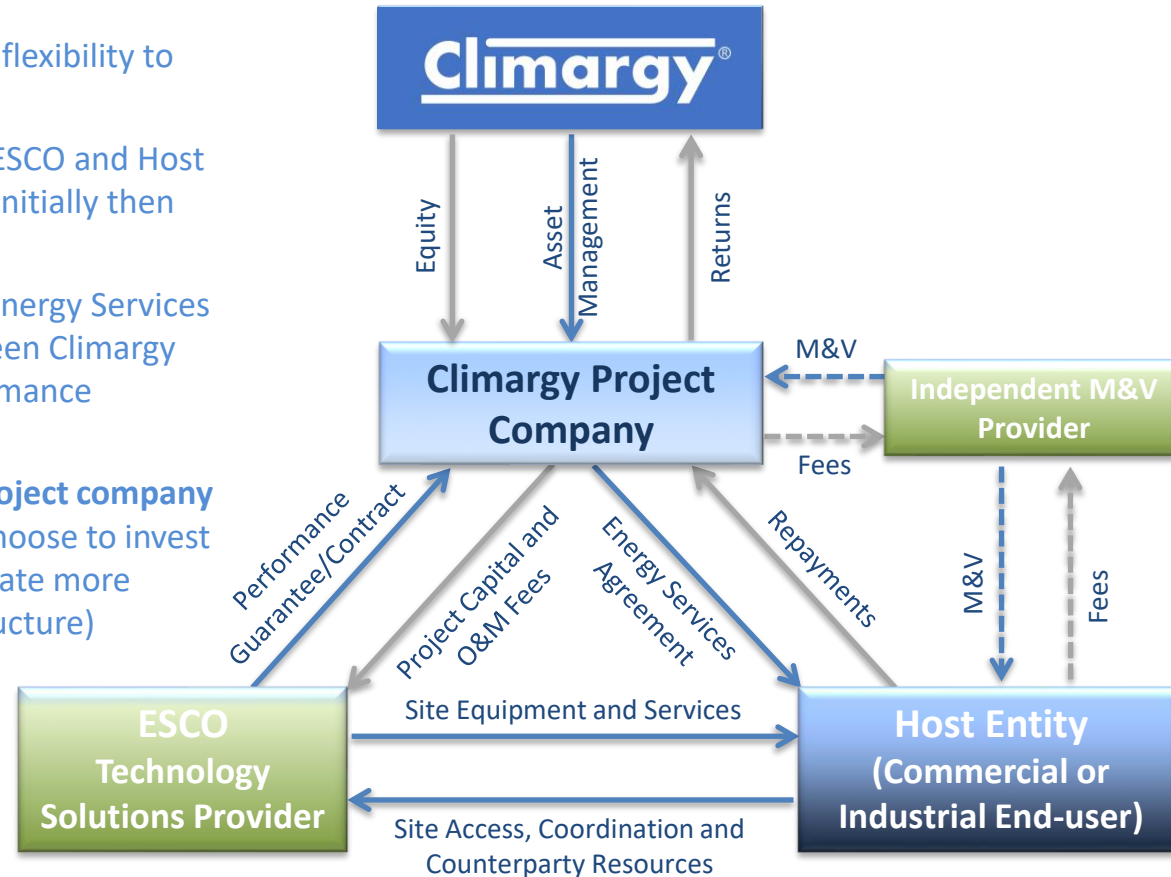


## Indicative project structure

Customized according to risk management requirements of specific projects

Alternative structures will have the flexibility to provide for:

- **Late brownfield engagement** (ESCO and Host execute performance contract initially then Climargy opts to invests)
- **Greenfield engagement** (new Energy Services Agreement is negotiated between Climargy and the Host, backed by performance guarantee of ESCO)
- **ESCO or Host Entity stake in project company** (the ESCO or Host Entity may choose to invest in the project company and create more flexibility in the contracting structure)



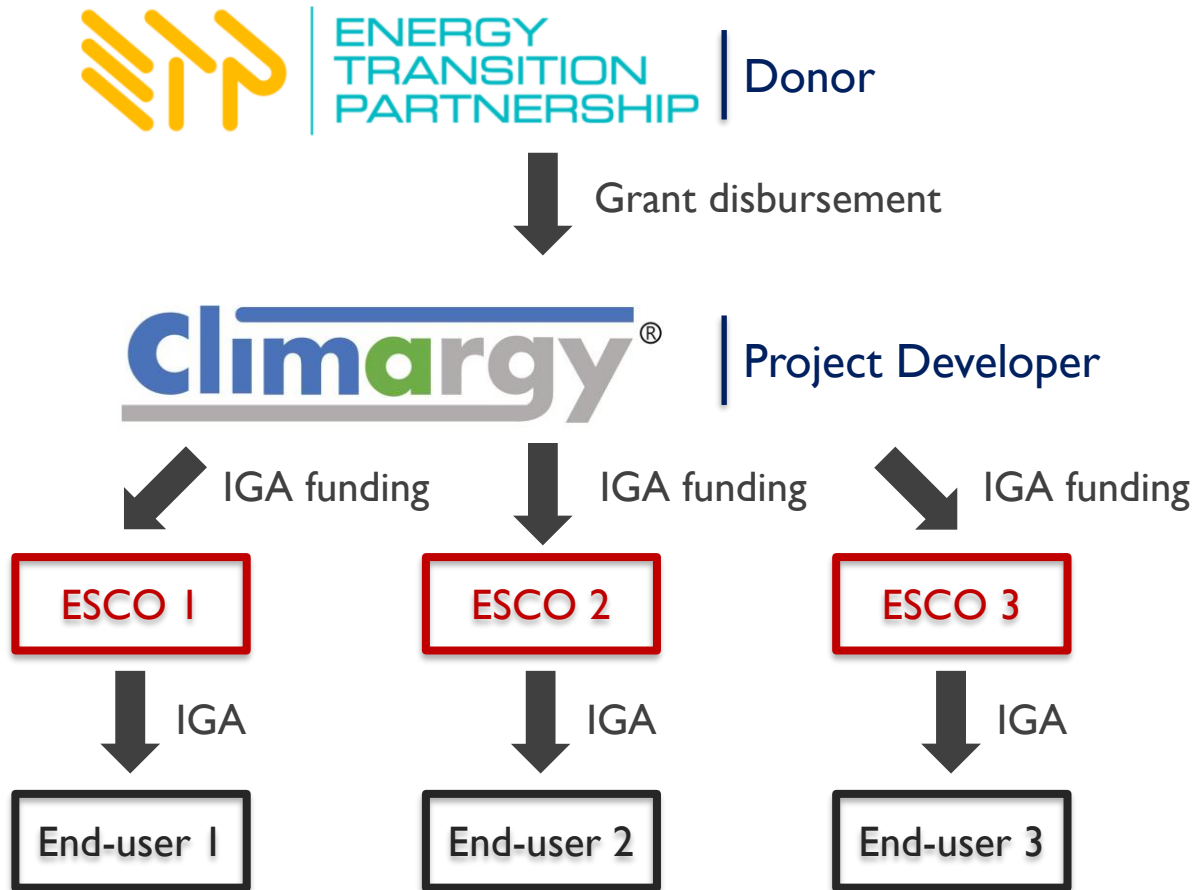
## Lopez-led Pi Energy and Climargy® forge energy efficiency partnership



Pi Energy Chairman Federico R. Lopez (top, right) and Climargy President Alexander Ablaza (bottom, right) lead the ceremonial signing event with several officials and senior representatives of both firms on 9 December 2021. (Screenshot Images: Pi Energy)

- In December 2021, Climargy inked a **joint development partnership agreement** with the Lopez Group to develop energy efficiency and conservation projects for business establishments.
- The portfolio of projects resulting from this partnership is estimated to **reduce 1 terawatt-hour of energy consumption through 2040**, equivalent to **PHP 7.5 billion in power cost savings**.
- Wholly-owned subsidiary Pi Energy will represent the Lopez group in this partnership, with its Vice President Ariel S. Villaseñor joining the board of Climargy.

## ETP and Climargy® Co-financed Program for Investment-Grade Audits (IGAs)



- Climargy will take on 11-15 IGAs over a 3-year program period. Contract amount per IGA will vary depending on project scope.
- ESCOs engaged for IGAs are within Climargy's network of partners and will be selected based on end-users' major sources of energy consumption.
- End-users are ideally from the commercial and industrial sectors. Industries include but are not limited to refineries, heat-intensive manufacturing, and aircraft maintenance.
- EE projects include but are not limited to HVAC retrofits, compressed air systems, high-efficiency motors, and variable-speed drives.

## Strategic Direction

Climargy's five-person Board of Directors is composed of:



**Alexander Ablaza** is CEO of Climargy Inc. Over half of his 36-year professional career has been dedicated to growing energy efficiency and other clean energy investments in over 12 Asian markets. Alex has played a key role in the development of the clean energy industry in Asia, by identifying and diligencing >\$3 billion in direct investments and also shaping policy, regulatory, and funding initiatives. He previously served as Regional Sustainability and Climate Finance Specialist for Asia at the International Finance Corporation/World Bank Group; and as the Asian Development Bank's (ADB) bank-wide energy efficiency expert and coordinator of ADB's \$2 billion/year Clean Energy Program and its predecessor Energy Efficiency Initiative. He founded and chairs the Asia-Pacific ESCO Industry Alliance and the Philippine Energy Efficiency Alliance. He holds a Masters in Business Economics and a Bachelors degree in Civil Engineering.



**Adrian S. Cristobal Jr.** is a former Secretary (Minister) of Trade and Industry and Chairman of the Board of Investments of the Philippines. In 2016, he received the Presidential Medal of Merit in 2016 from President Benigno S. Aquino III. He returned to the private sector in 2017 and became the President and later Vice Chairman of SteelAsia, the Philippines' leading steel manufacturer until 2021. He was a director of the Federation of Philippine Industries (FPI) and Chairman of the Economic Research Institute of ASEAN and East Asia (ERIA). Currently, Mr. Cristobal has a private law practice and does consulting work. He also teaches at the Ateneo de Manila University School of Law. Mr. Cristobal obtained his Juris Doctors of Law from Ateneo de Manila University and his Bachelor of Arts in Political Science from the University of California, Berkeley, U.S.A.



**Ariel S. Villaseñor** has 15 years of experience in driving market growth, business development, and general management in energy and power equipment, distribution, and logistics industries. He is an expert at scaling operations, planning, and executing critical business initiatives distinguished by double-digit revenue gains and achieving growth despite fluctuating market and economic conditions. Ariel is a Vice-President at both Pi Energy Inc. and FirstGen Corp., where he spearheads strategic positioning, business development, and portfolio expansion for the power equipment and energy solutions businesses. He holds a Bachelor of Science degree in Industrial Management Engineering from De La Salle University.

## Strategic Direction (continued)



**Demosthenes B. Donato** was admitted to the Philippine bar in 1989. He has a masteral degree L.L.M. in Banking Corporate and Finance Law from Fordham University, New York in 1995; and law degree L.L.B. from the Ateneo de Manila University in 1988. He was a Member of the Center for Research and Special Studies, Inc. (CRSS) in 2001; a Member of the University of the Philippines - Solair Labor Law Reform Task Force in 1999-2000; and a Member of the Integrated Bar of the Philippines - Committee on Labor and Industrial Relations in 1992 1994. He is the author of Labor Juris (2015). His legal practice covers mergers and acquisitions, foreign investment regulation, corporations, project finance and labor.



**Luzonia M. Em** was admitted to the Philippine bar in 1990. She has a law degree L.L.B. from the University of the East in 1987. She is a current Member of the Integrated Bar of the Philippines, and a former Member of the Law Society of Hong Kong (Registered Foreign Lawyer). Her field of practice covers corporations, intellectual property, immigration and family.

## Strategic Advisory



**Dr. Francisco L. Viray**, a Co-founder and Advisor to the Board of Directors of Climargy Inc, has about a half century of unparalleled professional and management experience in the energy and engineering markets through work in the private sector, government service and the academe. His long list of previous stints include CEO of Phinma Energy, EVP of Phinma Corp, President of the Energy Council of the Philippines, Secretary (Minister) of Energy of the Philippine Government, President (then Chairman) of the National Power Corporation, Executive Director of the National Engineering Center and Dean of the College of Engineering of the University of the Philippines (UP), Diliman. As Board Director, he also served Phinma, Union Cement, Petron, Manila Electric Company (Meralco), among others. He holds a PhD in Engineering from West Virginia University and an MS Electrical Engineering from UP Diliman.

## Investment and Advisory Operations



**Alexander Ablaza** leads frontline investment and advisory operations as Principal Advisor and CEO of Climargy Inc. Over half of his 36-year professional career has been dedicated to growing energy efficiency and other clean energy investments in over 12 Asian markets. Alex has played a key role in the development of the clean energy industry in Asia, by identifying and diligencing >\$3 billion in direct investments and also shaping policy, regulatory, and funding initiatives. He previously served as Regional Sustainability and Climate Finance Specialist for Asia at the International Finance Corporation/World Bank Group; and as the Asian Development Bank's (ADB) bank-wide energy efficiency expert and coordinator of ADB's \$2 billion/year Clean Energy Program and its predecessor Energy Efficiency Initiative. He founded and chairs the Asia-Pacific ESCO Industry Alliance and the Philippine Energy Efficiency Alliance. He holds a Masters in Business Economics and a Bachelors degree in Civil Engineering.



**Mikhael Fiorello C. Llado**, a CFA Charterholder and a GARP-certified Energy Risk Professional (ERP), supports investment, portfolio management and advisory operations as Head of Investment Operations of Climargy Inc. Early in his career, he was a commercial officer for Energy Development Corporation's 700MW Leyte geothermal portfolio. He played a key role in project management, contract review, and economic analysis for the Leyte facility's power plant rehabilitation project, which took majority of the company's \$160 million capex program in 2016. Mikhael specializes in investment due diligence, market assessment, risk analysis, and financial modeling. When he moved to Boston for his graduate studies, he co-founded the Boston Consulting and Impact Coalition, a consulting partnership between the business schools of Tufts University, Babson College, Brandeis University, Boston University, and Boston College. Under his graduate program, Mikhael also managed a portion of Boston College's \$2.5 billion endowment fund. He holds MBA and MS in Finance degrees from the Carroll School of Management of Boston College.

## Office Operations



**Kristin C. Canonizado** serves as Office Manager of Climargy Inc. She has 17 years of experience in quality assurance, data analysis, and project management for companies such as Thomson Reuters, Thomson Philippines Corporation, Primark Philippines, and Financial Times Information. Prior to joining Climargy, she also offered investment and risk management products that are tailor-fit to her clients' needs. Kristin holds a Bachelors degree in Accountancy from the Far Eastern University.



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