Inodú develops solutions and provides consulting services to improve the sustainability of the energy and water value chain for businesses, governments, law-firms and non-governmental organizations in Latin America. We are focused on using our analytic capabilities to come up with solutions and ultimately put them to the test by implementing them with our clients.

We believe in the creation of real partnerships with our clients to build businesses, capabilities and creative solutions to solve their and the world’s energy and sustainability challenges.

We take a multidisciplinary approach to solve complex problems structuring a team with the necessary technical, operational, regulatory, financial and business knowhow to define and adequately address the problem.

Since its inception in Austin Texas in 2012, inodú has grown. We have worked with clients in the United States, Colombia and Chile.
We help our clients navigate through uncertainty and challenges with the following services:

1. Energy and Water Project Support.
5. Operational and Energy Efficiency.
6. Data Analytics.
7. Innovation and Business Development.
case studies
Contributing to the Improvement of Environmental Regulation

In 2014 the Ministry of Energy published an Energy Agenda, one of the goals defined in the agenda was to improve the sustainability of thermoelectric facilities which produce cost efficient and reliable energy in Chile. Additionally, collaboration with Ministry of the Environment’s was proposed in order to improve existing environmental regulation or develop new environmental regulation for thermoelectric facilities in Chile.

Between 2014 and 2017, inodú has been involved in several engagements which have led to an improvement in Chile’s environmental regulation associated with water use at thermoelectric facilities and other industries. Inodú has used a multidisciplinary approach to gain a clear and complete understanding of the challenges faced by water use at thermoelectric facilities Chile. To address water use issues in Chile, inodú has worked closely with stakeholders such as the Ministry of Energy, the Ministry of the Environment, the Subsecretaria de Pesca (Subpesca), Directemar, other regional institutions and the private sector.

In 2014, the Chilean Energy Ministry released a study prepared by inodú which identified some of the challenges posed by water use at thermoelectric facilities in Chile. The study contained an initial assessment of the current regulatory, environmental, economic, and design practices for cooling systems at thermoelectric facilities in Chile and abroad.

In a follow-up study in 2015 led by inodú, the regulatory gaps associated with the use of cooling water at thermoelectric facilities and for other economic activities in Chile were identified and addressed. In 2016, the Ministry of Energy published a guide prepared by inodú with best practices for the use of cooling water at thermoelectric facilities. Inodú is working with Subpesca to develop a guide to estimate the equivalent number of organisms lost due to entrainment and impingement for the environmental impact assessment process. The guide should support the use of a cost benefit analysis to evaluate the different alternatives to mitigate impingement and entrainment.
Until 2014, Chilean Distribution Companies and the Chilean National Energy Commission were facing significant challenges sustainably satisfying the energy needs of regulated clients through the regulated energy auction process. The private sector was perceiving important risks associated with the process, which led to limited participation in the auctions. The regulated contract market is an important source contracting opportunities, on average it accounts for approximately 50% of the power contract market in Chile.

Inodú supported ACERA (Chilean Renewable Energy Association) in defining and evaluating readily implementable opportunities to improve the tendering process. Considering Chile’s regulatory requirements, prior to the definition of Law 20.805, we identified an opportunity to propose a block scheme to divide up the energy auctioned based on the demand profile into a day block, a peak block and a night block. The block scheme developed by inodú reduced risk for generation companies interested in participating in the auction and the distribution companies purchasing the energy by restructuring the way the auction assigned risks. The risks were reassigned to those who are capable of managing the risks.

The National Energy Commission adopted the block scheme prior to the definition of Law 20.805. The block scheme had a significant impact on the strategies used to present offers at the regulated auctions. Since the implementation of the block scheme between 2014 and 2016, inodú has supported clients which have won 6.330 GWh/year in energy contracts or 25% of the energy auctioned in the regulated auctions during this time frame. Our clients have been adjudicated contracts which are within the highest 15 percentile of price.

### Load Profile in SIC

- **Night Block**
- **Day Block**
- **Peak Block**

Load of Central Interconnected System (SIC) and definition of Block Scheme.
Improving Industrial Operations

Inodú has supported clients whose energy consumption is an important component of their industrial operations, improve their energy procurement and use. Inodú has worked with clients in the identification of opportunities to improve their energy supply or use to complement their strategy and operational practices.

We have supported our clients with the definition and implementation of operational improvements complex industrial processes where reliability is critical requirement. We have worked with our clients to improve the definition of energy contracts which supply large industrial operations with loads up to 50 MW.

Our team and collaborators have significant experience in transformational processes to improve energy, water and raw materials management across a broad range of industries. Our approach is grounded in a deep understanding of regulation, the energy markets, industrial processes, operational improvement techniques such as lean, and industrial standards such as the ISO 50,000, ASME EA 1 – 4 and others.

Today, companies have an opportunity to evaluate how to reduce strategic inputs to operations in order to improve the long-term sustainability of their operations. We have deep expertise in improving the operations of boilers and heating systems to improve energy use and water use.
Our services include:

1. Evaluation of power and energy contracts.
2. Support with negotiation of energy supply.
4. Support reducing inputs to industrial processes and increases in productivity.
5. Improvements of operations with lean practices.
6. Evaluation of options to improve energy use through cogeneration, self-supply and storage.
7. Definition, implementation, evaluation and improvement of energy and water management systems.

Methodology to evaluate the reduction of inputs and increases in productivity

1. Develop an energy, water or mass balance based on the equipment specifications under expected operational conditions.

2. Identify the primary areas of consumption and the opportunities with the highest potential.

3. Evaluate the operations of the production systems with the most potential for savings using as a reference:
   - Warranties provided by Equipment Provider.
   - Operational Manuals from Manufacturer.
   - Standards (ISO; ASME; IEC) to evaluate operational conditions.

4. Operational Improvements

5. Replace Equipment Based on Best Available Technology
Due-Diligence of Projects

An asset cannot be valued purely on cash flows or by estimating its price, other elements can have a significant impact on the assets value such as the regulation which governs it, its utility and purpose and the context under which it operates.

Today in a world where complexity is on the rise, to be competitive it is crucial to evaluate projects using a multidisciplinary approach which considers economic, social, environmental and technical risks.

Inodú has conducted due-diligences for more than 1000 MW in energy projects, including 700 MW of wind projects. The due-diligences were conducted using an integrated multidisciplinary approach with the following points of view:

1. Market and portfolio analysis.
2. Interconnection.
3. Transmission system development and curtailment risk.
5. Feasibility including site visits.
6. Progress with permits.
7. Relationship with communities.
8. Evaluation of communities near project.
9. Social analysis by identifying gaps in community participation process, special requirements and considerations imposed by indigenous communities, observations made by relevant authorities in environmental impact assessment process.
10. Gathering of resolutions for or against the project in environmental assessment system.
12. Economic feasibility of project.
13. Analysis of requirement and timeline to meet commitments imposed by regulated auction energy contracts.
14. Recommendations to improve environmental impact assessment based on identified risks and challenges.
The rapid introduction of renewable energy is creating significant challenges and opportunities in the operations of the electric system. Errors in the renewable energy forecasts can have significant impact on the dispatch and operational requirements set for conventional generational facilities.

The traditional investment assessment processes are being challenged. Under the emerging operational regime, the need for baseload is being replaced with the need for assets and services which can provided agility and flexibility to the electric system.

Inodú has supported businesses and institutions gain a better understanding of the future operations of the electric system to make better policy and investment decisions.
Our services include:

1. Evaluation of the operations of the electric system.
2. Dynamic evaluation of spot prices (hourly, monthly).
3. Performance of thermal power plants:
   - Capacity Factor,
   - Number of hours operating in a year
   - Number of hours operating at the minimum operational conditions
   - Number of deep load following events in a year
   - Number of starts
   - Cycling metrics
   - Others
5. Maintenance planning.
6. Regulatory analysis and support related to renewable energy integration.
7. Evaluation of impacts associated with CO2 taxes and prices.
8. Evaluation of curtailment to renewable energy generation units.

Effects of Renewable Energy Integration in Operation and Planning of Power System:
Considering Different Wind Resource Zones

Evaluation of dispatch with operational restrictions

Evaluation of flexibility option and emissions caused by cycling in thermoelectric facilities

Heat Rate Curve

Histogram of Hours of Operation at Specific Capacity Factor

Evaluation of dispatch with operational restrictions

Thermoelectric  Hydro  Solar  Wind
Jorge Moreno

Jorge has more than 13 years of experience in the energy sector. At inodú, he has led multidisciplinary teams in the development of recommendations associated with the investment and operation of assets in the energy sector, as well as regulatory assessments. He has supported government organizations, industry associations, as well as developers and operators with interests in the electrical sector.

He worked along with several stakeholders in the early stage development of a multi-purpose water usage agreement for Embalse la Punilla. He has supported the Ministry of Energy in the development of an environmental regulation for water use at thermoelectric power plants and other facilities which withdraw water and discharge into watercourses as part of their industrial processes.

Between 2004 and 2010, he worked as a Project Engineer, Senior Consultant, and Director of Projects at SYSTEP. He led the development of projects for institutions in Chile, Perú, Colombia, Brazil and Argentina. Jorge led project finance process support, due diligence, revision and renegotiation of electrical supply contracts, litigations, tariff studies for medium-sized systems (2006), sub-transmission (SIC 4 and SIC 5, 2010) and added value for distribution. Specifically, he developed projects for the following companies: Aguas Andinas, Codelco, Endesa, SN Power, Cementos Bío Bío, CAP, HydroChile, McMoran Copper & Gold, Pehuenche, XSTRATA, Edelimag, E-CL, Gener, Guacolda, Chilquinta, Saesa, CGE, JP Morgan, Transelec, SASIPA, Gas Atacama, Comisión Nacional de Energía, Ministerio de Energía, Chilectra, Edesur, Edelnor, Coelce, Codensa, Ampla, amongst others.

Between 2002 and 2005 he was part of a start-up focused in the development of instrumentation solutions. In 2004 he did an internship at the Centre Science des Processus Industriels et Naturels de la École Nationale Supérieure des Mines in Saint Etienne, France, where he worked on energy storage systems and gas sensors.

He obtained a M.S. Management and Engineering from the Massachusetts Institute of Technology (MIT), where he was part of the executive board at the MIT Energy Club (2011-2012). He worked at General Electric’s Grid IQ Center in Atlanta, GA, and the Fraunhofer Center for Sustainable Sciences in Engineering at Pontificia Universidad Católica de Chile. His work in the energy sector has also been published in several international magazines and publications.
Carlos Barría

Carlos has more than 13 years of experience in the energy sector, having worked with both public and private organizations in the development of regulatory analysis, power market analysis, as well as planning and operation of electrical systems. He has a degree in Civil Industrial Engineering, with a concentration in electricity from Pontificia Universidad Católica de Chile, where he also obtained a Master’s of Science Degree. Additionally, he has a certificate in Economic and Administrative Law from the same university.

As a consultant at inodú Chile, he has participated in several regulatory, technical and economic projects within the Chilean energy sector. Also, as of November 2014, he is the Executive Director of the Small and Medium Size Generators Association, where he has actively participated in the development of new laws, norms, and procedures in the energy sector, leading and presenting initiatives to Chilean executive and legislative authorities.

Between March 2012 and March 2014, he was the Chief of the Renewable Energy Division at the Ministry of Energy, leading the public policies and regulation for renewable energy. He was responsible for the development of important projects related to the development of renewable energy, as well as regulatory projects, laws, rules, regulations, transfer agreements, development plans, assessments, amongst others. Additionally, he was a permanent member of the executive board at the Centro de Energías Renovables (CER), supervising strategies, yearly planning, programs, and budgeting for the CER.

Before, during the year 2011, he was the Chief of Staff for the Subsecretaría de Energía, and advisor in terms of electrical markets for the Centro de Energías Renovables. During the year 2010 he was the planning advisor for transmission systems of the CDEC-SING. From 2007 until 2009 he was the Head of Projects for Energy Markets and Regulation at KAS Engineering, leading projects of transmission expansion, long-term hydrothermal operations, commercial risk for the electrical market, amongst others.

Between 2004 and 2006 he worked as a Project Engineer at SYSTEP, developing projects in transmission tolls and sub-transmission tariffs.

Carlos has combined his professional career with academic activities, since 2015 he has been teaching the class on Energy Policy at Pontificia Universidad Católica’s School of Engineering, and since 2010 he has been an electrical engineering professor at Universidad de los Andes.

From 2014, he has been a member of the Expert Policy Panel for the Climatescope report in 2014 and 2015, commissioned by the Multilateral Investment Fund (MIF). Additionally, he is a member of IEEE, the PES IEEE, and the Chilean Institute of Engineers.
Donny has more than 12 years experience in the renewable energy and aerospace industry. He has consulted for startups, Fortune 500 companies, and government agencies to help them execute innovative energy, water and sustainability projects.

As part of inodú, Donny has participated in a broad range of projects in Chile and Latin America, including supporting the development, construction and operation of solar, wind, biomass, natural gas and hydro projects. Additionally, he has led business development, worked on energy policy, market analysis and energy/operational efficiency studies.

In Chile, he has supported the identification and mitigation of multidisciplinary risks, such as new business, technical, environmental and social, in energy projects. For example, he supported the development and execution of the community participation process for a 40 MW solar project in Vallenar.

He has supported the Ministry of Energy in the development of an environmental regulation of water use at thermoelectric power plants and other facilities which withdraw water and discharge into watercourses as part of their industrial processes. He has provided just in time advice to the Ministry of Energy related to the implementation of a carbon pricing mechanism in the power sector.

He provided planning and project management advice to the leadership team in charge of the development and construction of close to 2 GW of wind capacity across the U.S. and Mexico. He supported the construction of three wind farms in the U.S. amounting to over 600 MW of wind capacity. Additionally, he had the opportunity to support ARPA-E in the development of alternative commercialization strategies for their superconductor technology.

Prior to inodú, Donny worked at Booz Allen Hamilton (Booz & Co) where he focused on helping define and transform complex projects, including NASA’s Orion spacecraft. He worked for the CFO of the U.S. Department of Energy, supporting the development of a solar innovation strategy to guide resource allocation decisions across the nation’s solar innovation pipeline and technology portfolio.

Mr. Holaschutz received his Masters in Management and Engineering from the MIT Sloan School of Management and the Engineering Systems Division at MIT. While at MIT he specialized on energy systems, sustainability, product strategy and innovation. He received both a Bachelors and Masters in Aerospace engineering from the University of Texas at Austin. Mr. Holaschutz is a native Spanish speaker and has lived and worked in the U.S., Mexico and Chile.
Héctor Moreno

Electrical-Civil Engineer with more than 30 years of experience in engineering projects and the maintenance of cellulose, paper, chemical, and generation plants. He is certified as a European Energy Manager by the Eurem German Chilean Chamber of Commerce and Industry.

During 4 years he was part of the POCH team as Manager and/or Specialist. He worked for 29 years with Grupo Arauco, where he was part of the executive team for Celulosa Arauco y Constitución - Planta Constitución. For 17 years he was the Director of Projects and Engineering, he was in charge of optimizing the production and consumption of energy, water, and raw materials; programming and reducing maintenance costs; managing and controlling operational risk; guaranteeing compliance with environmental and legal requirements.

He managed and implemented projects approved from the conceptualization stage up to commissioning. He implemented projects that increased CELCO’s production and productivity from 700 to 1100 tons per day. Additionally, he contributed to the development of 50 MW generation capacity; developed projects for the continuous improvement in the usage of thermal, and electrical energy, as well as water; contributed to the reduction of CELCO’s environmental footprint through the installation of equipment to reduce gas atmospheric emissions, dust, and noise levels.

He has developed treatment plants for liquid industrial residues, water treatment, and a 500 m water intake system. He developed projects focused on reducing the consumption of water; and developed measurements to increase the reliability and availability of operations of complex industrial facilities.

Along with the CELCO team, he developed processes for the improvement in project management, incorporating procedures aimed at controlling project delivery periods, costs, and technical development guided by the ISO 9001-2000, ISO 14000, OHSAS 18001 norms and the execution of Hazop.

Hector has participated in every single stage of conceptualization, definition, implementation, application, certification, and continuous improvement of the ISO 9000 and ISO 14000 management systems. He participated in the Internal and External Auditing Processes carried out by QMI-SAI Global. Additionally, he participated in Audit processes developed by external insurance companies.
## Experience

### 1. Energy and Water Project Support

Supported with the development of projects with a capacity greater than 2,000 MW (2012-2013), including projects in 6 States.

<table>
<thead>
<tr>
<th>Client</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B.P. Wind</strong></td>
<td>Support and negotiation of interconnection for small hydro generation project with SAESA – Maria Elena Project 350 KW.</td>
</tr>
<tr>
<td><strong>Generadora Eléctrica María Elena</strong></td>
<td>Definition of small hydro generation project alternatives (between 1 and 3 MW). Evaluated project for investor.</td>
</tr>
<tr>
<td><strong>Grupo Matetic</strong></td>
<td>Supported the evaluation and development for the Toro Blanco photovoltaic power plant (52 MW).</td>
</tr>
<tr>
<td><strong>Sun Systems</strong></td>
<td>Collaborated in the development of 5 small hydro projects (total capacity 15 MW) and one shared transmission line 66 kV.</td>
</tr>
<tr>
<td><strong>Generhom</strong></td>
<td>Audited the development and construction process for a hydro-electric power plant (1.5 MW) at Puyuhuapi.</td>
</tr>
<tr>
<td><strong>Marine Farm</strong></td>
<td>Assessed the interconnection alternatives for a biomass project of 3 MW.</td>
</tr>
<tr>
<td><strong>Agroenergía Pacífico</strong></td>
<td>Technical-environmental support in participation process with the Vallenar community for a 40 MW solar generation Project – Voluntary Agreements for Pre-Investment.</td>
</tr>
<tr>
<td><strong>Consejo Nacional de Producción Limpia</strong></td>
<td>Technical-environmental support in participation process with the Catrihuala community for a 100 MW wind generation Project - Voluntary Agreements for Pre-Investment.</td>
</tr>
<tr>
<td><strong>Junta de Vigilancia del Río Ñuble</strong></td>
<td>Support in the definition of an Operational Agreement for La Punilla Dam (94 MW), between Direccion de Obras Hidraulicas (DOH) and Junta de Vigilancia del Río Ñuble.</td>
</tr>
<tr>
<td><strong>Asociación de Canalistas Canal del Chacayal</strong></td>
<td>Defined 5 different small hydro generation project alternatives. Project evaluation.</td>
</tr>
<tr>
<td>Client</td>
<td>Services Provided</td>
</tr>
<tr>
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</tr>
<tr>
<td>Nordex</td>
<td>Supported the contract evaluation process to sell energy to regulated clients and due-diligence of a wind generation project 30 MW.</td>
</tr>
<tr>
<td>Odinsa &amp; BNP Paribas</td>
<td>Support in due-diligence Project for a thermal and solar photovoltaic generation Project (Total of 110 MW), including market assessment.</td>
</tr>
<tr>
<td>Banco BBVA</td>
<td>Due-diligence for a solar-photovoltaic generation Project (200 MW) and strategic analysis of the power market.</td>
</tr>
<tr>
<td>Siemens</td>
<td>Social, environmental, and commercial due-diligence to four wind farms located in three different regions of Chile. Total portfolio capacity of 730 MW.</td>
</tr>
<tr>
<td>EPM</td>
<td>Due-diligence for a solar photovoltaic generation Project (+100 Mw) and strategic analysis of the power market.</td>
</tr>
<tr>
<td>Schwager Energy</td>
<td>Technical due-diligence for a 400 KW biogas project.</td>
</tr>
</tbody>
</table>
### Environmental and Energy Sector Regulatory Support

<table>
<thead>
<tr>
<th>Description</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support in the evolution of regulation associated to pricing instruments for CO2. Project with PMR-Chile, financed by the World Bank.</td>
<td>Ministerio de Energía</td>
</tr>
<tr>
<td>Development of Guide to Assess the Impact of Water Intake Systems on Hydrobiological Resources for projects in the environmental assessment process.</td>
<td>Subsecretaria de Pesca y Acuicultura</td>
</tr>
<tr>
<td>Development and presentation of a guide with best practices in the water use for cooling systems at thermoelectric facilities.</td>
<td>Ministerio de Energía</td>
</tr>
<tr>
<td>Environmental regulatory proposal for cooling systems at thermoelectric power plants and other facilities which use water. Proposal was validated by different stakeholders.</td>
<td>Ministerio de Energía</td>
</tr>
<tr>
<td>Study of to assess technical, economic, regulatory and environmental challenges at thermoelectric power plants and their cooling systems.</td>
<td>Ministerio de Energía</td>
</tr>
<tr>
<td>Training about regulatory framework of water withdrawal and usage at thermoelectric power plants and desalination facilities in Chile.</td>
<td>AES Gener / Eco Tecnos</td>
</tr>
<tr>
<td>Supported the analysis of a proposal for the Energy Efficiency Bill developed by the Ministry of Energy (Ministerio de Energia).</td>
<td>National Resources Defense Council</td>
</tr>
<tr>
<td>Developed proposal for the architecture of an hourly block scheme, which was presented to the CNE. Support in analysis of regulation and procedures related to regulated client energy auction.</td>
<td>ACERA A.G.</td>
</tr>
<tr>
<td>Regulatory and commercial support associated with CDEC- CNE.</td>
<td>Potencia y Mainco</td>
</tr>
<tr>
<td>Developed a mechanism to quantify distribution losses from Hydroelectric PMGD (3.5 MW) interconnection with Cooprel.</td>
<td>Generhom</td>
</tr>
<tr>
<td>Performed evaluation to connect directly to the Trunk Transmission System during the Sub transmission planning process.</td>
<td>Mainco</td>
</tr>
<tr>
<td>Revision of calculations for unavailability and failure effects at Central Espinos y Olivos.</td>
<td>Potencia</td>
</tr>
<tr>
<td>Advisory related to ancillary service regulation and power sufficiency.</td>
<td>Potencia y Mainco</td>
</tr>
<tr>
<td>Client</td>
<td>Services</td>
</tr>
<tr>
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</tr>
<tr>
<td>ACERA A.G.</td>
<td>Risk and regulatory analysis in Troncal Cardones - Polpaico expansion.</td>
</tr>
<tr>
<td>Total - SunPower</td>
<td>Assessment of regulation associated with the development of a solar project portfolio.</td>
</tr>
<tr>
<td>ACERA A.G.</td>
<td>Developed proposal for risk management mechanism from transmission congestion through the assignment of tariff income.</td>
</tr>
<tr>
<td>ACERA A.G.</td>
<td>Analysis and recommendations associated for law bill which establishes new electrical energy transmission systems and creates an independent coordinating entity.</td>
</tr>
<tr>
<td>Pattern Energy</td>
<td>Regulatory and strategic support related to the power market.</td>
</tr>
<tr>
<td>Potencia y Mainco</td>
<td>Regulatory and strategic support related to the power market.</td>
</tr>
<tr>
<td>EPM</td>
<td>Regulatory and strategic support related to the power market.</td>
</tr>
<tr>
<td>Nordex</td>
<td>Regulatory and strategic support related to the power market.</td>
</tr>
<tr>
<td>Sun Edison</td>
<td>Regulatory and strategic support related to the power market.</td>
</tr>
<tr>
<td>Latin American Power</td>
<td>Regulatory and strategic support related to the power market.</td>
</tr>
</tbody>
</table>
Support in the evaluation process to improve options of energy supply and contracting.

Strategic analysis of the Chilean energy sector for regulated client auctions 2015-1. Strategic evaluation of the effect of integrating renewable energy in the operation of thermoelectric and hydroelectric plants.

Strategic analysis in the bidding process for regulated client auctions Bid 2013-03 – 2° Call.

Strategic analysis of the power market and renewable energy to help define priority development areas in Chile, niche identification and market challenges.

The Natural Gas Business in Chile – Training given to Metrogas professionals.

Training for plant operators about working with CDEC-SIC for the Los Cururos wind farm (109 MW).

Presentation of market opportunities in the power sector.

Strategic support related to the power markets, regulated client auctions and opportunities for the portfolio of projects under development.

Strategic and regulatory market analysis.

Strategic analysis of the Chilean power sector.

Strategic analysis of the Chilean power sector.

Analysis of Distribution Toll calculation.

Strategic analysis of wind power generation Project (100 MW).

Support in the technical, regulatory, and financial analysis of a biogas generation Project.

Market analysis for transmission.
## Operational and Energy Efficiency

| Energy audit for milk and cheese production process. | Los Tilos |
| Energy audit for production system at Los Fiordos production facility. | Los Fiordos |
| Proposal for energy efficiency and supply improvement with renewable energy at Observatorio Paranal. | E.S.O. y Ministerio de Energía |
| Energy audit for industrial process in the III Region. | Abastible |
| Program for the identification and definition of innovation projects in the Chilean industrial sector. Program executed along with the Enterprise Innovation Institute and the Georgia Institute of Technology’s Georgia Manufacturing Extension Program. | Papeles Biobio, Oxiquim, Emaresa e Inamar |

## Innovation and Business Development

| Market and regulatory support in the development of CPV technology. | Soitec |
| Strategic and regulatory analysis in two Latin American countries. | First Solar |
| Technical and strategic assessment of superconductor commercialization (2012-2013). | Departamento de Energía USA (ARPA-E) y la U. de Houston |
| Presentation of market opportunities. | BrightSource Energy |
| Strategy and regulatory analysis for opportunities related to solar projects. | Total-Sunpower |
| Identification and assessment of use alternatives of biomass. | Grupo Matetic |
7 **Highlighted Articles**

Assessing regulatory, environmental, economic, and technical challenges of energy and water use in thermoelectric facilities in Chile (link). Published by MIT, Engineering System Division. Fall 2015.

SDM alums use systems thinking to help power Chilean observatory (link). Published by MIT, Engineering System Division. Spring 2014.

8 **Presentations at Conferences and Seminars**


Flexibilization in the Operations at Conventional Power Plants in Chile. Workshop organized by Engie Lab, Santiago, June 2016.


How to move towards a more sustainable development and operation of thermoelectric generation? Symposium on “Thermoelectric Generation with Coal: A Sustainable Option“, Universidad de Concepción, August 2015.


Applying Systems Thinking to Energy and Sustainability Challenges in Chile. MIT SDM Systems Thinking Webinar Series. April 2014.


