
“2018: The Year of Change”

Fraunhofer Center for Solar Energy Technologies „CSET“



Prof. Dr. Frank Dinter

2018: „The Year of Change“

17. April 2018

Angelini Center

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Que cambió?

■ Nuevo Gobierno

- Aprobación Corfo a CSET en 2013 (Gov. Piñera)
- Inicio Oficial CSET Febrero 2015 (Gov. Bachelet)
- Ahora tenemos Consenso nacional en desarrollo ERNC

■ Nueva Fase para CSET

- Fase 1 terminada exitosamente (Feb 2015 hasta Feb 2018)
- Fase 2 nuevas tareas, ideas, productos, prototipos, etc....

■ Nuevo Director Ejecutivo de CSET

- Siguiendo el sol

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Quien es CSET?

- **Centro de Excelencia, CORFO**
- 2015: CSET comienza operaciones
- Subsidiario de Fraunhofer ISE (Alemania)
- Co-ejecutor: Pontificia Universidad Católica de Chile
- **Investigación y desarrollo aplicado**
 1. Sistemas solares PV
 2. Sistemas solares térmicos (CSP, Calor solar de proceso, tratamiento de aguas con energía solar)
 3. Integración horizontal (Eficiencia energética, Edificios, Red y mercado eléctrico,...)
- Equipo de más de 60 personas (FCR & UC)

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Nuestros Objetivos desde el principio:

Generar innovación para lograr la implementación de energía solar a gran escala en los principales sectores industriales y comerciales en Chile

Investigar y abordar retos científicos, tecnológicos, económicos y de mercado para la energía solar en Chile

Educar y entrenar técnicos, profesionales, investigadores, directivos y personas que toman decisiones en energía solar

Desarrollo de tecnologías y sistemas adaptados a las condiciones de Chile

Apoyar políticas de estado para la implementación de energía solar en Chile

Crear un puente entre la investigación académica y la innovación empresarial

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What does CSET want to change?

Ahora en ingles !

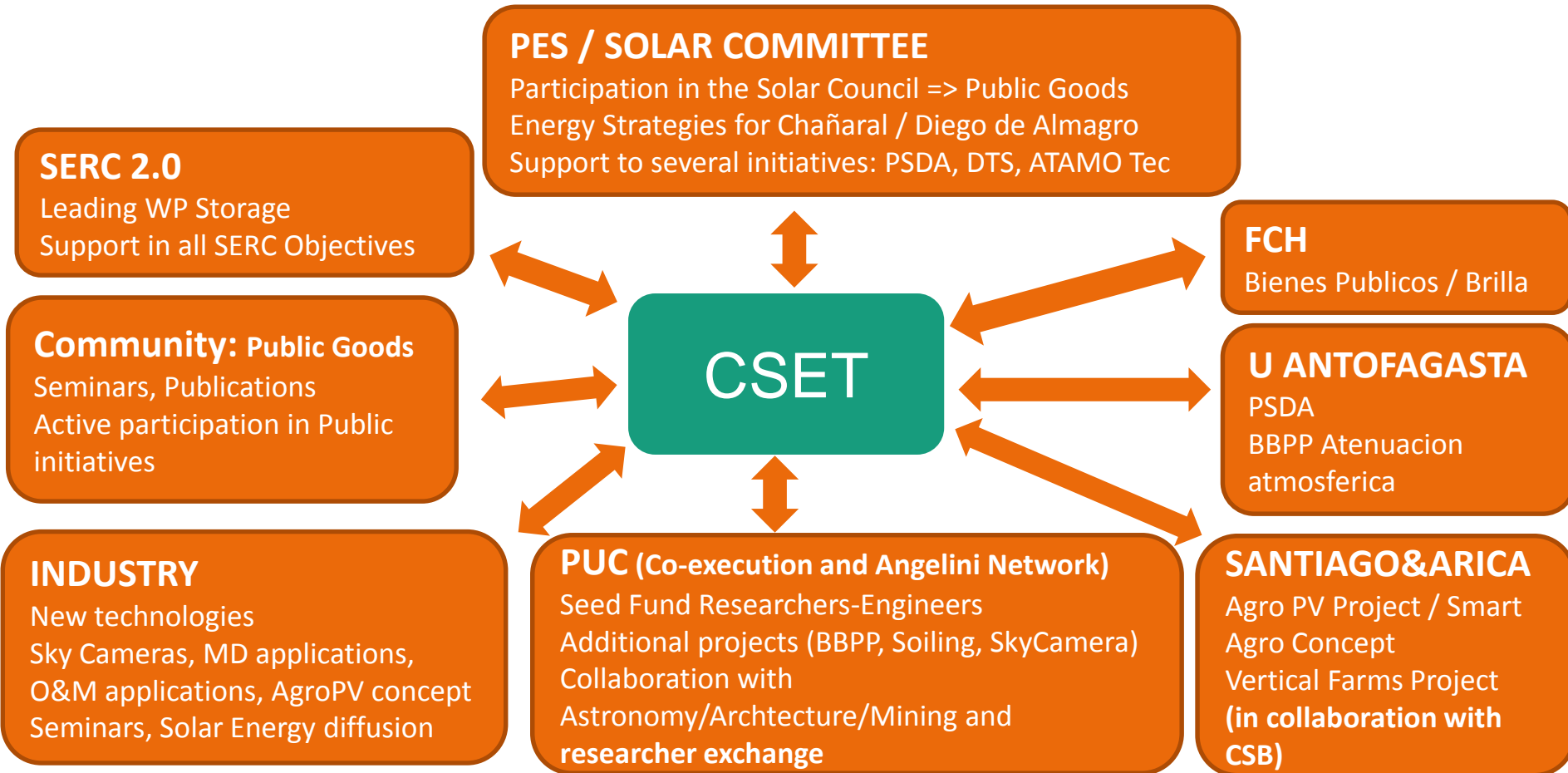
- Chile is one of the best countries for using Solar Energy
 - Highest direct radiation on earth
 - Many possibilities to use solar energy
- Currently in Chile: 2 GW of Photovoltaic installed and 1 CSP plant (100 MW) under construction
- Solar technology can do much more for Chile

CEST wants to support Chile

- To reduce emissions and to use and generate energy in an environmental friendly way and “make Chile a solarized country”

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Where are we today?



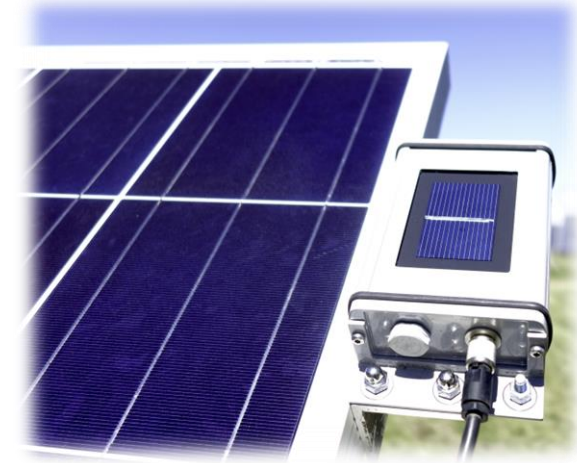
➤ **CSET delivers already a general contribution to R&D activities**

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CSET is experienced in Solar Technologies

Photovoltaics:

- Cheap and easy to install
- Produces electricity during day time
- Storage possible but expensive for large scale



Concentrating Solar Power CSP:

- Large scale electricity generation
- With integrated storage for 24h production
- Dispatchable energy on demand



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Applied Research at CSET:



■ PV

- Quality assessment for materials, cells and systems
- Cleaning, soiling
- Fore- and Now-casting
- O&M Issues, etc.



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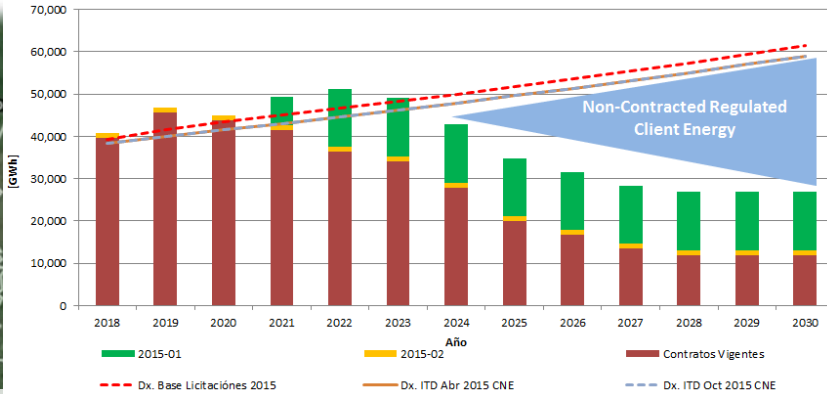
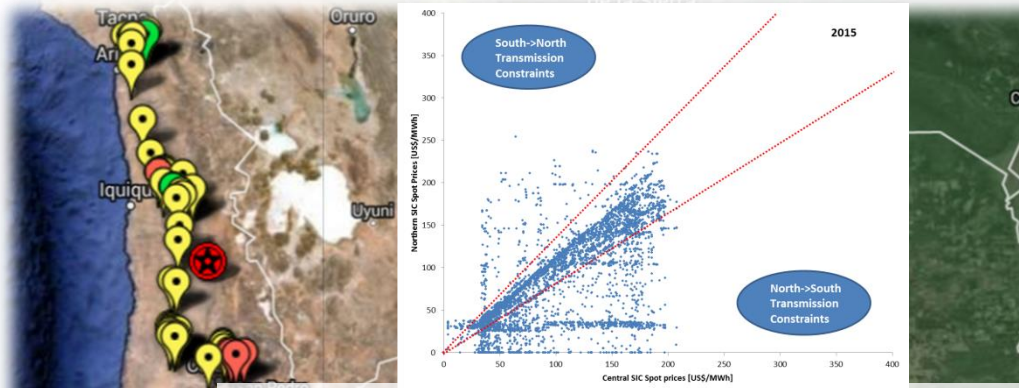
Applied Research at CSET:

- **Solar Thermal (CSP and Solar Heat for Industrial Applications)**
 - Studies in industrial branches with high heat demand
 - Solar heating, - cooling, - drying in industry

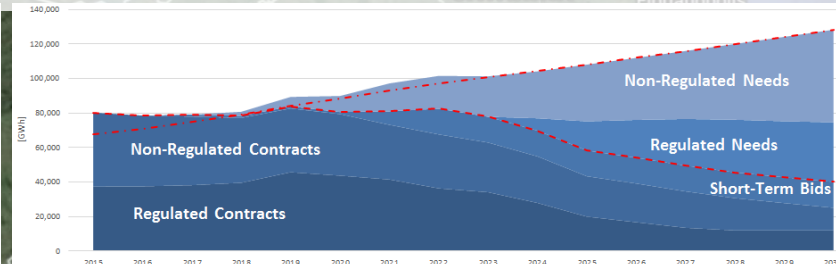
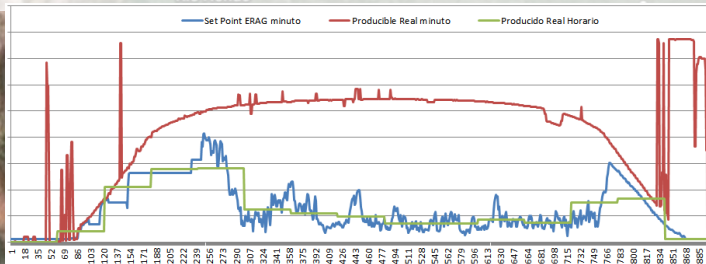


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Applied Research at CSET:

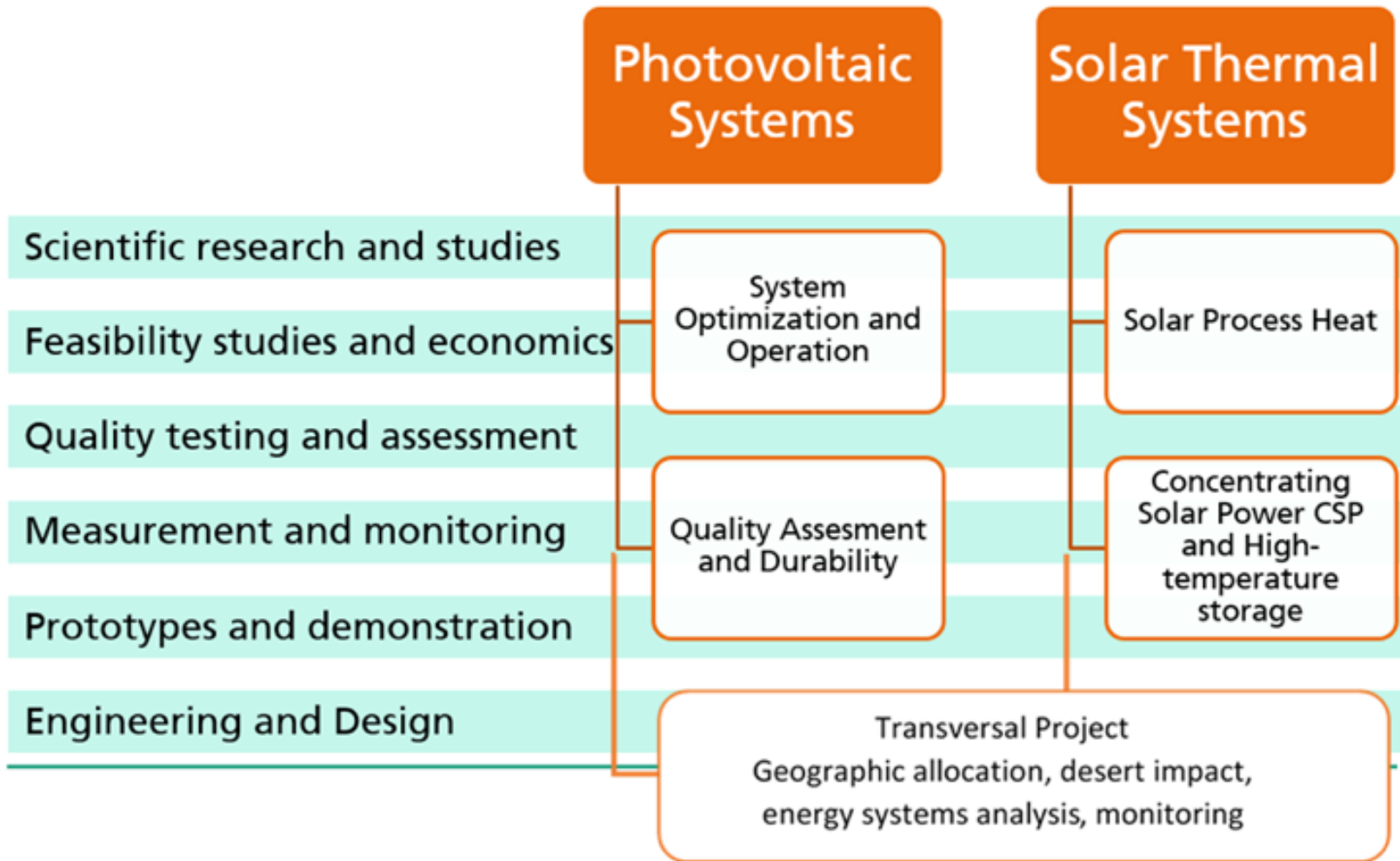


- **Transversal projects**
 - Integrated Studies for high efficiency and solar energy
 - Techno-economical studies
 - Design studies and Prototype recommendation for clients
 - And some others related to solar energy and markets



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Applied Research and Sustainable Services



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Conclusions

- CSET is an established Center of Excellence of Corfo
- Perfect partners in Chile and abroad
- Chile has the best solar irradiation on Earth
- PV plants operation can be optimized
- Big potential for solar Solar Thermal Power Plants in future
- Many possibilities to use solar energy in Industrial Processes
- CSET is going to support government, industry and others

➤ **Let's solarize Chile together !**

For a Solar Future of Chile

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