STANDARD ENERGY

Shmuel De-Leon Energy Ltd

Vanadium Redox Flow Battery Seminar

Oct. 21 ~ Oct. 22, 2019

—

Jeju Island,
Republic of Korea

Seminar Details

Location & Schedule

Jeju Island,
The location may be changed to Seoul or Daejeon;
if so, notice will be sent in advance.

Republic of Korea

Oct. 21 ~ Oct. 22, 2019

Topics

- Battery essentials & Safety
- Grid storage batteries
- VRFB overview
  - Components & materials
- Research & development trends
  - Membrane
  - Electrode & bipolar plate
  - Electrolyte
  - Stack
  - Testing technology
- Practical hands-on training

Advantages

- Updates on latest R&D and technology trends in the VRFB field
- Opportunity to build and operate the VRFB test cell
- Efficient basic training for new researchers and students
- Insight into the overall battery industry

Programs

Day 1: Oct. 21

09:00 - 09:30	Registration & Networking
09:30 - 10:00	Welcome & Opening Remark Standard Energy
10:00 - 11:00	Battery Essentials Shmuel De-Leon
11:00 - 11:30	Coffee Break
11:30 - 12:30	Battery Safety Shmuel De-Leon
12:30 - 13:45	Lunch
13:45 - 14:15	Grid Storage Batteries Shmuel De-Leon
14:15 - 15:00	VRFB Overview Standard Energy
15:00 - 15:30	Coffee Break
15:30 - 16:45	R&D Trend of Membrane Research Institute
16:45 - 17:45	R&D Trend of Electrode & Bipolar plate TBD

Day 2: Oct. 22

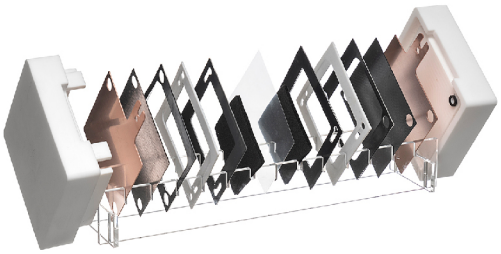
09:00 - 09:45	Networking
09:45 - 11:00	R&D Trend of Electrolyte & Stack TBD
11:00 - 11:30	Coffee Break
11:30 - 12:30	VRFB Testing Technology Standard Energy
12:30 - 13:45	Lunch
13:45 - 14:15	Practical hands-on VRFB training - Safety instruction Standard Energy
14:15 - 15:15	Practical hands-on VRFB training - Unit cell & B. O. P Standard Energy
15:15 - 15:45	Break
15:45 - 17:45	Practical hands-on VRFB training - Test equipment assembly - Operating VRFB unit cell Standard Energy

Training Equipment

A practical experiment will be conducted with training equipment developed by Standard Energy.

The training equipment includes the following:

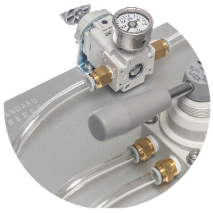
- VRFB unit cell
- Pneumatic compression jig
- Peristaltic pump
- Electrolyte tank



The equipment has been proven by providing high reliable test results in VRFB research.

For more information:

www.stndenergy.com/research



Registration

Please visit the following webpage

www.stndenergy.com/seminar

Registration	**$2000**
Academic registration	**$1300**

(Full time students)

※ A copy of an academic institute ID is required for academic registration.

※ 15% discount for early registration until Jun. 30th.

- The registration cost includes the following:
  - Full participation in the seminar
  - Hard copy of the seminar presentation
  - 2-lunch, 1-dinner, and refreshments
- Cancellation policy
  - Submitted via e-mail
  - 20 working days prior: 50% refund
  - Less than 20 working days: no refund

Contact

Ilbeom Choi, Ph. D. | Standard Energy Co. Ltd.

Phone number: +82-70-4734-9954 | seminar@stndenergy.com

Organizers

Standard Energy

Standard Energy was founded in 2013 by alumni and professors of KAIST in the Republic of Korea and MIT in the USA. The company is based on an advanced technology for the design and production of vanadium redox flow battery (VRFB) as large-scale secondary batteries for energy storage systems. The company and members hold over 200 patents for their groundbreaking technology, and they are currently manufacturing prototype products.

WAVE Battery™ (Water · Air · Vanadium Energy storage Battery)
Standard Energy's redox flow battery, the WAVE Battery, is a modular pack design VRFB including cells, electrolyte and an innovative electrolyte circulation system. The WAVE Battery is compact, reliable (leakage-tolerant), and highly cost-effective for manufacturing and maintenance.

Shmuel De-Leon Energy

In 2010, Shmuel founded Shmuel De-Leon Energy, Ltd. and started providing Energy Storage knowledge services to customers including leading companies, organizations and governments. Shmuel De-Leon Energy, Ltd. identifies needs and develops unique knowledge tools and services helping the industry to design optimal energy storage solutions. These unique knowledge tools and services save our customers effort, time, and cost.