

Asia ESCO Conference 2010

Activities of ESCO in Taiwan

Dr. Bill Huei-Jiunn, Chen

Taiwan Association of Energy Service Companies, TAESCO

Dr. Bing-Chwen, Yang

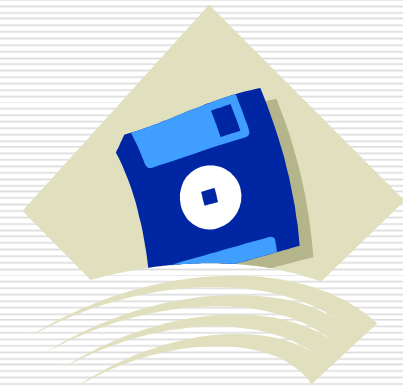
Industrial Technology Research Institute, Taiwan

Date : 2010.01.14~15

#03-005

Outline

- ☐ Backgrounds
- ☐ Activities
- ☐ ESCO Business
- ☐ Ways to promote ESCO business in Taiwan



Background

❑ Structure of Taiwan ESCO business

- Small and medium enterprises

❑ Importance

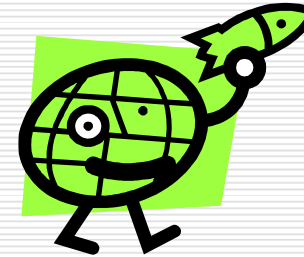
- Urge energy users to save energy
- Encourage clients to invest in energy saving
- Promote ESPC and GHG reduction



Taiwan Association of Energy Service Companies

□ TAESCO

- Established on June 17, 2005
- 143 corporate members
- 283 individual members



□ Position

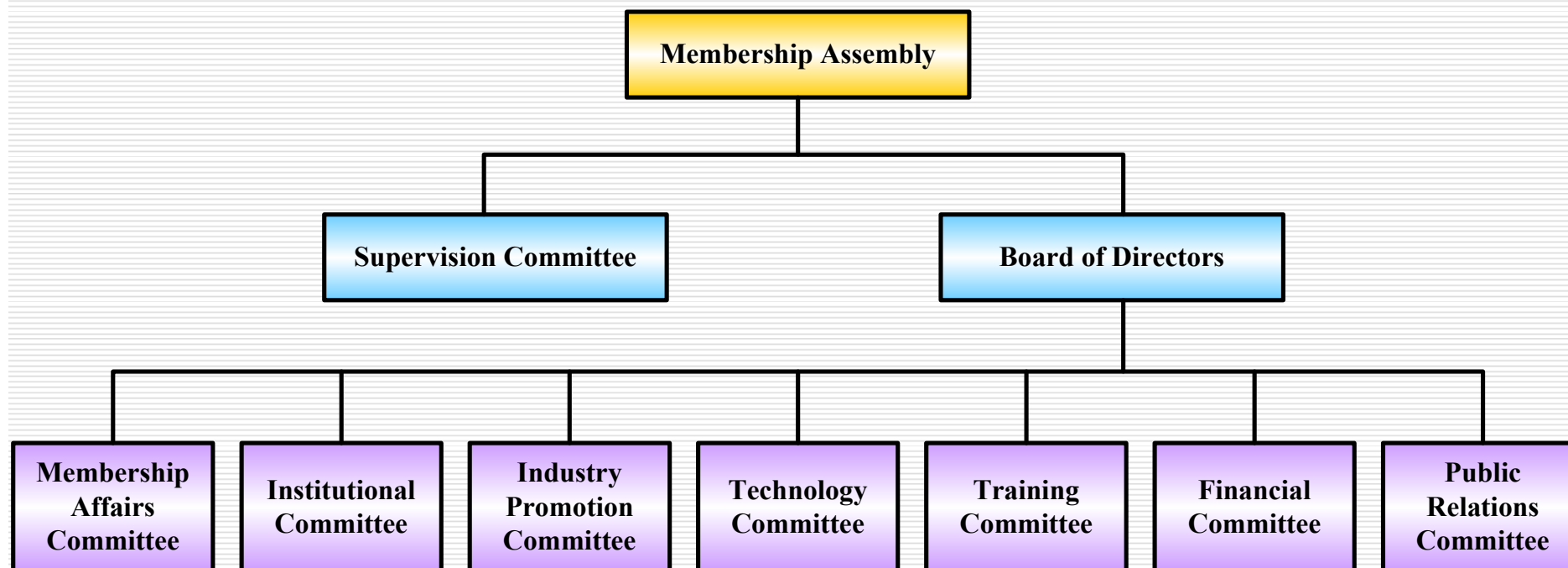
- Provide knowledge of ESCO industry
- Link ESCO with clients, ESCO with ESCO, ESCO industry with government
- Propose energy policies to government



台灣能源技術服務產業發展協會

Taiwan Association of Energy Service Companies

Organization of TAESCO



Taiwan Energy Service Association

□ TESA

- Established on August 14, 2008
- 74 members

□ Position

- Set up and maintain orders in ESCO industry
- Link ESCO with clients, ESCO with ESCO
- Sustain the development of ESCO industry



Activities

	2006	2007	2008	2009
ESCO training programs	-	3	4	3
ESPC financial resource seminars	2	3	3	4
ESCO successful cases study seminars	6	6	4	4
ESCO business linking conference	-	-	-	4



Activities : ESCO training programs



Activities : ESPC financial resource seminars



Activities : ESCO successful cases study seminars



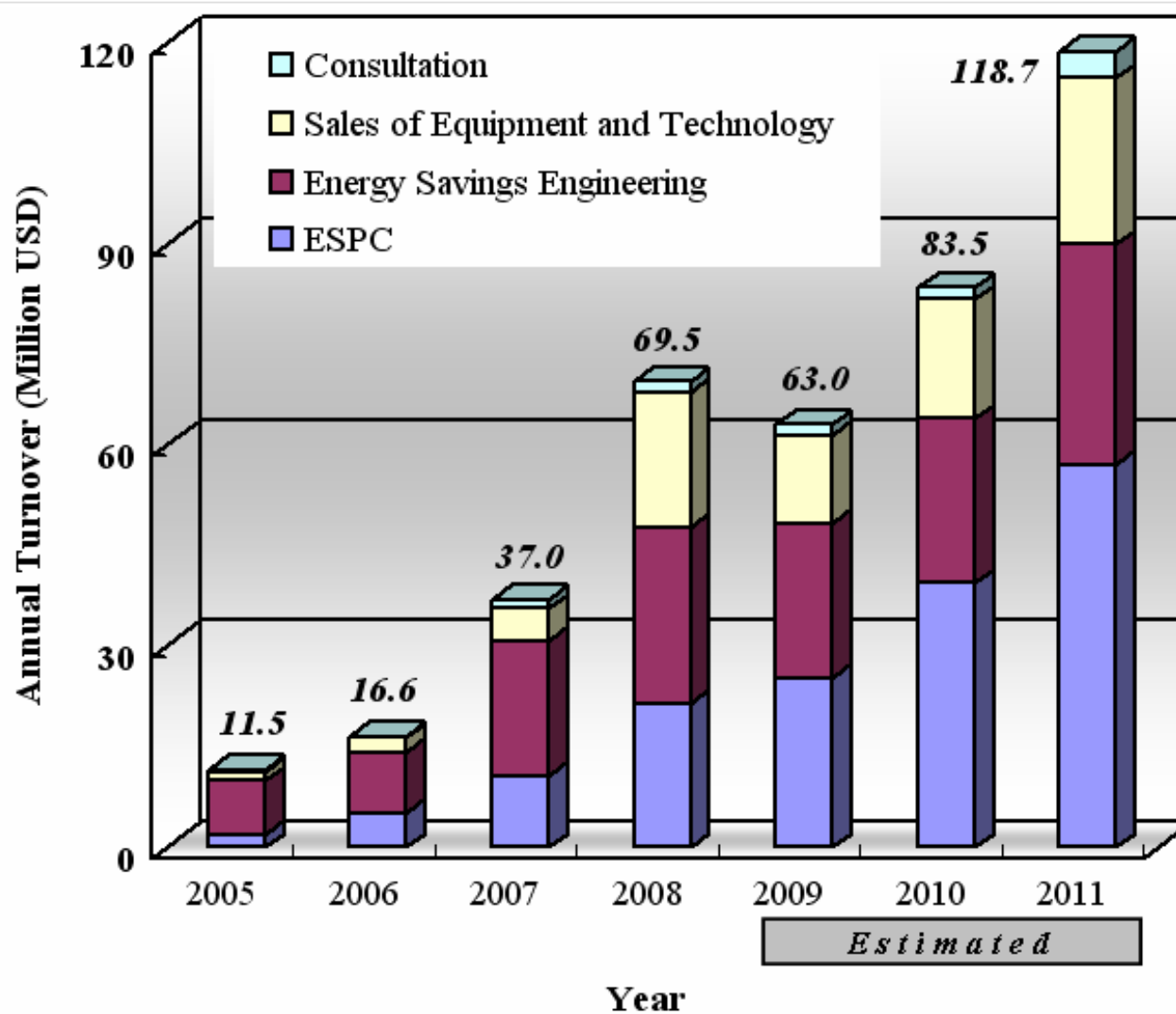
Activities : ESCO business linking conference



Activities : Issue newsletters



Annual turnover of Taiwan ESCO industry



Future ESCO market (Surveyed in 2007)

Category of factory	ECM amount	Cost savings (thousand USD / yr)	Energy savings (KLOE / yr)	CO ₂ reduction (ton / yr)
Pulp & paper	12	1,944	7,366	20,791
Petrochemical	5	1,367	7,262	18,697
Petrochemical industry	8	9,310	22,867	68,143
Oil refining	14	23,995	89,174	219,232
Ethylene glycol	11	4,405	10,795	35,712
Cogeneration	6	2,695	11,714	50,016
Aromatic hydrocarbon	5	1,153	4,139	18,618
Alkali	3	3,503	24,998	64,310
Total	64	48,372	178,315	495,519
Ave.		6,046	22,289	61,940

Future ESCO market (Surveyed in 2008)

Category of factory	ECM amount	Cost savings (thousand USD / yr)	Energy savings (KLOE / yr)	CO ₂ reduction (ton / yr)
Vinyl chloride	3	2,459	53,597	31,162
Oil refining	6	12,504	43,875	129,430
Power plant	13	16,553	27,102	67,372
Pulp & paper	9	481	1,739	4,705
Aromatic hydrocarbon	21	15,998	45,212	176,383
Bisphenol A	11	1,653	5,724	24,545
Paper & box	7	1,525	16,432	40,852
Olefin	14	5,431	21,280	89,884
Total	<u>84</u>	<u>56,603</u>	<u>214,961</u>	<u>564,333</u>
Ave.		<u>7,075</u>	<u>26,870</u>	<u>70,542</u>

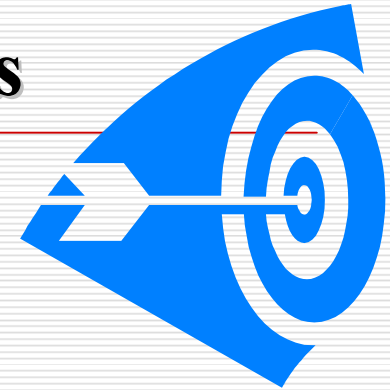
Future Energy savings market

Category of manufacturing industry	Nr. of companies
Pulp & paper product	2,121
Chemistry product	3,175
Rubber product	1,577
Non-metallic mineral product	3,697
Chemical material product	1,601
Metal basic product	3,568
Plastic product	10,864
Petroleum and coal product	238
<i>Total</i>	<i>26,841</i>

Future Energy savings market

- If 1% of industry manufacturers adopt energy saving strategy, the potential energy cost saving will be 6 million USD per year.
- **Potential energy saving market in manufacturing industry**
 - 1.6 billion USD
- **Potential energy saving market in whole industry**
 - Exceed 3 billion USD

Ways to expand Taiwan ESCO business



- ☐ Set up laws for energy savings
- ☐ Establish rules for ESCO industry
- ☐ Government financial support to private enterprises
- ☐ Issue professional license of M&V
- ☐ Organize energy service provider alliance (ESPA)