

Lack of Mutual Engineering Recognition : A Hindrance in the Global Economy

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China: A Building Services Engineer's New Frontier

- ◆ Hong Kong Polytech offers a degree in HVAC Engineering
- ◆ China consumes 10% of the world's energy
- ◆ 2.3 times the amount they consumed in 1980
- ◆ Buildings projected to consume 1/3 of China's energy

Getting in on the Chinese Action

- ◆ American, European, and Australian Architects already there
- ◆ Buying American and European hvac products
- ◆ China is Tennessee's 3rd Largest International Customer
- ◆ Why not try to get Engineering Credentials in China?

Roadblock !





No Mutual Engineering Recognition Between US and China

Going West to Get to the East

- ◆ Mainland China Recognizes Hong Kong
- ◆ Hong Kong Recognizes...
 - UK, Australia, Canada, Ireland
 - Other Asian and Pacific Nations
 - South Africa



香港工程師學會

THE HONG KONG INSTITUTION OF ENGINEERS

Ireland Recognizes US Professional Engineers !!

.....But a personal interview is required

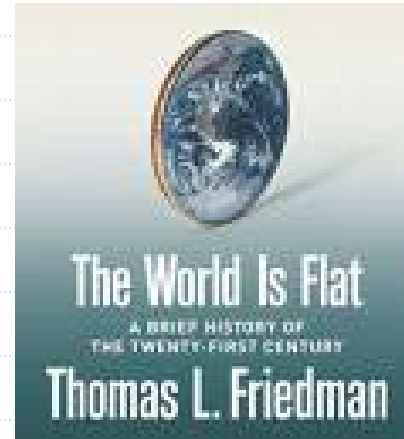
 ENGINEERS
\$ 1,200 airplane fare
IRELAND

\$400 meals & lodging

3 days off work

Where Do Engineers Go From Here?

- ◆ We no longer live in purely national economies
- ◆ The world is “flattening”
- ◆ All the USCIEP provides is recognition of engineering education



Lobbying the Authorities

Professional Engineers and Chartered Engineers need to let the authorities know our situation.

But to whom do we lobby?

US System: A Primer

- ◆ Four-Year, ABET-accredited, Bachelor of Science Degree
- ◆ Eight-Hour Fundamentals of Engineering Exam – Engineering Intern Certification
- ◆ Four years of experience supervised by a Professional Engineer
- ◆ Eight-Hour Principles and Practices of Engineering Exam – Professional Engineer License
- ◆ Reciprocal Registration required in any state where the PE wishes to practice.

- ◆ NCEES Council Record makes reciprocity between states and territories fairly simple, though sometimes expensive
- ◆ Canadian Provinces recognize US PE license with some restrictions
- ◆ Mexico has a treaty with Texas to honor Texas PE licensees who have demonstrated Spanish language fluency

Who has the Authority?

- ◆ In the US, each state, the District of Columbia, and several territories have their own licensing authorities – 55 total licensing authorities!
- ◆ In Europe and much of Asia, Chartered Institutes have the authority.
- ◆ Canada is a “hybrid” of the two.

- ◆ ASHRAE and the other technical societies have no governing authority in the US.
- ◆ The National Society of Professional Engineers lobbies the government and informs Congressmen and Senators on engineering-related issues, but no governing authority.



◆ National Council of Examiners for Engineering and Surveying

- Administers Engineering Intern Exams
- Administers Professional Engineer Exams
- Maintains the United States' International Register of Professional Engineers
- Has no governing authority



◆ British Model is much simpler

- Chartered Institutes...
- Are the technical societies
- Administer registration process
- Issue the credentials
- Maintain continuing education records
- Regulated by one body - ECUK

So, Now What?

American Engineers

- ◆ NCEES writes Model Law that states usually adopt without revision
 - They usually only deal with domestic issues
- ◆ NSPE can encourage Senators to ratify treaties
- ◆ Engineers need to contact elected federal officials and the NSPE in large numbers – votes and money talk!

British Engineers

- ◆ Chartered Institutes need to press the Engineering Council of the United Kingdom to move forward on mutual recognition with the US
- ◆ Recognition is needed for professional credentials not just educational degrees

Continental Engineers

- ◆ Perhaps FEANI could extend its influence beyond Europe and reach out to the US?
- ◆ Continental engineers do not have the worldwide influence that US and British engineers do in the Building Services disciplines

Summary

- ◆ The World is shrinking
- ◆ If Engineers do not reach out to become global practitioners, we will get squeezed out of it
- ◆ We need to change the laws to allow mutual recognition of education and professional credentials

Thank You!

- ◆ Thank you for the opportunity to visit with CIBSE-ASHRAE
- ◆ Questions?
- ◆ Comments?
- ◆ Discussion?