

# Creating a Skilled District Energy Workforce

Stan Gent, President, Seattle Steam

Barbara Hins-Turner, Exec. Director,  
Center of Excellence for Clean Energy

Bob Clarke, President/COO,  
PanGlobal Training Systems Ltd



# Washington's Center of Excellence Sector Strategy



## Vision

Become a national model to develop partnerships between:

- ❖ Business
- ❖ Industry
- ❖ Education
- ❖ Organized labor
- ❖ Workforce system
- ❖ Economic development



## Mission

Liaison between partners and the state's education system to:

- ❖ Drive the energy economy
- ❖ Create highly skilled workforce
- ❖ Provide consistent curriculum
- ❖ Meet industry needs
- ❖ Provide state-wide coordination

# Centralia College AAS Energy Technology/Power Operations

## 1<sup>st</sup> Year Energy Classes

- Energy Efficiency
- Print Reading
- Power Generation
- Industrial Safety
- **Plant Tours**

## 2<sup>nd</sup> Year Energy Classes – PanGlobal Training

- Electrical Utility Distribution System
- Plant Systems and Equipment
- Plant Maintenance
- Refrigeration and HVAC





# Centralia College and Seattle Steam Partnership

- Incumbent Worker Training
- Online PanGlobal Training
  - 3<sup>rd</sup> Class Course  
15 credits
  - 2<sup>nd</sup> Class Course  
15 credits
- Certificate of Completion



**Ryan, Seattle Steam  
Plant Operator  
IBEW Local 77**



# Developing Washington's Energy Workforce



**Grand Coulee  
Hydro Plant Operator**  
Brian, IBEW 77



**BPA Systems Operator**  
Adrienne, IBEW 125



**Seattle City Light  
Meter Electrician Apprentice**  
Arlen, IBEW 77



**Seattle City Light  
Hydro Plant Operator**  
Nick, IBEW 77

**Tacoma Power  
Hydroelectric Utility Worker**  
Jake, IBEW 483



# 9<sup>th</sup> Annual Energy & Construction Best Practices Summit

Sustaining Our Nation's  
Infrastructure  
June 18/19, 2014

Convening Industry, Labor, Education,  
Workforce and Economic Development

Register at

<http://cleanenergyexcellence.org/>





# Introducing PanGlobal

- Creating Learning Materials specific to the Power Engineering profession for more than 90 years.
- PanGlobal's Mission is to produce quality learning products that bring professional achievements to Power Engineering and related occupations.
- Supports the training of professionals at all Power Engineering levels in Canada, the United States and around the World.

# Centralia College, Seattle Steam, and PanGlobal Training

## A Partnership for the Profession

- Established to support the ongoing training and certification of utility and distribution operators.
- Learning Materials are centered around third party operator certification requirements to maintain quality and relevancy.
- Training recognizes Real World experiences for their educational value.



# The PanGlobal - Centralia Product Mix

PanGlobal and Centralia's learning solutions consist of a mixture of the following components:

- Face to Face and Online Training
  - Associate Degree (4<sup>th</sup> Class)
  - Continuing Education (4<sup>th</sup> and 3<sup>rd</sup> Class)
  - OJT using complete online support (4<sup>th</sup>, 3<sup>rd</sup>, 2<sup>nd</sup> and Custom Courses)
- Learning Material Capabilities
  - Text modules or Textbooks
  - Companion Websites
  - Student Workbooks
  - Online Resources
    - Content
    - Assessments
    - Learning Activities
    - LMS support



# PanGlobal's Power Engineering Products

- PE1<sup>ST</sup> Class
- PE2<sup>nd</sup> Class
- PE3<sup>rd</sup> Class
- PE 4<sup>th</sup> Class
- PE5<sup>th</sup> Class
- Refrigeration
- Custom



# Learning Material Development

## Guided By:

- Training Syllabi and Code Requirements
  - Association of Chief Inspectors of Canada (ACI)
  - ASME
  - National Board of Boiler and Pressure Vessel Inspectors (NBBI)
- Curriculum Documents
  - SOPEEC, NIULPE, NAPE
- Product Review Committees
  - 5<sup>th</sup> – 1<sup>st</sup> Class Power Engineering Programs
  - Refrigeration
  - Safety
  - Reference
- Individual, Educator and Corporate input



# PanGlobal Learning Material Resources

PanGlobal learning ware consists of a mixture of the following components:

Base Textbooks (5<sup>th</sup> – 1<sup>st</sup> Class + Refrigeration Plant Operator) in English and French

- Student Workbooks
  - 5<sup>th</sup>, 4<sup>th</sup> and 3<sup>rd</sup> Class
  - Task Competency Logbooks
  - Math and Physical Science
- Custom Textbooks
  - 4 Provincial compilations (8 Titles)
  - 5 State Compilations (>25 Titles)
  - 3 National Association Compilations (>20 Titles)
  - Custom Topics (8 Titles)
- Online Resources
  - MyPower Learning Site
    - Textbook Resources
    - Direct Purchase Sites
      - E-Textbooks, Parts, Units & Chapters
  - Educator Portals
    - Content with Assessments
    - Media and Learning Activities

# Certified Product Development


- **Industry and Professional organizations** identify the training need.
- **Certifying Body** develops syllabi and approves courseware outlines.
- **Authors** are contracted based upon their **subject matter expertise** and educational background.
- **After Authoring** and internal editing, a content complete version of the module is sent to various educational partners, and key stakeholders who comprise a **Review Committee**.
- A “pre-publication edition” of the courseware is produced and presented to the Certifying Body for **Comment and feedback**.
- A final Edit is performed and signoff by the Content Manager – 1<sup>st</sup> Class PE
- **5 Year Cycle of Review maintained on Committee**

# Custom Courseware Creation

- Develop course outlines according to approved Syllabus or Needs Analysis (Dacum)
- Write new materials to fill gaps
- Assemble text materials from existing and new materials
- Create Online Support materials
- Approve at Client Meetings
- Apply within region
- Proceed through Certification Approval if available



# MyPower Learning Website

Record Video  
Insert

home | courses | calendar | forum

## MyPower Learning

### Welcome to the MyPower Home Page

**Important:** Keep your user profile updated with the most current information. Please do this directly after logging in if you haven't done so recently. This will ensure that your learning provider is able to contact and present you with up to date course materials and events.

**Note:** We are no longer offering free media.

#### Login

Username

Password

[Create new account](#)  
[Lost password?](#)


#### Calendar

June 2012


Sun	Mon	Tue	Wed	Thu	Fri	Sat
3	4	5	6	7	1	2
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

#### Course categories


- Product Purchases
- Additional Resources
- Corrections & Updates




Answers




Having Problems?



Corrections & Updates



We recommend that you  
download **firefox**



# The Seattle Steam Learning Program

- Self Directed Online Training (PanGlobal) + Learning Support (Centralia)
- Learning Flow
  - Essentials of Power Engineering (4<sup>th</sup> Class)
  - Advanced Concepts in Power Engineering (3<sup>rd</sup> Class)
  - Power Engineering for Chief Engineers (2<sup>nd</sup> Class)
  - Plant and Business Management for Chief Engineers (Optional)
  - Distribution Operators (Modified 4<sup>th</sup> Class)
- Current Status
  - Boiler Operators and Mechanics in program
    - 7 Completed 2<sup>nd</sup> Class
    - 10 Completed 3<sup>rd</sup> Class
    - 12 Completed 4<sup>th</sup> Class
  - Distribution Operators
    - 9 Completed modified 4<sup>th</sup> Class program

# Distribution Workers Program

- **Main Topics:**

- **Boilers & Heating Systems**
- **Applied Mathematics, Air Handling, Water Treatment & Plumbing Systems**
- **Boiler Auxiliaries, Heating System Controls & Water Treatment**
- **Electrical Systems, Illumination & Maintenance**
- **Refrigeration Systems & Accessories**



# Thank You: Any Questions?

**R. A. (Bob) Clarke**

President and Chief Operating Officer

PanGlobal Training Systems Ltd.

1835 – 20<sup>th</sup> Ave. N.W.

Calgary, Alberta, Canada T2M 1H4

P:403.284.7176 F: 403.210.5629

E-mail [bob.clarke@panglobal.ca](mailto:bob.clarke@panglobal.ca)