

**NPC Industrial Maintenance and Operations Advisory Council**  
**Working Lunch**  
**9-20-2012**  
**APS Cholla Power Plant, Joseph City, AZ**

Present: Bob Martineau, Kim Finch, Jason Martineau, APS; Paul Clark, Kenny Keith, Ann Hilliard, Dean Peggy Belknap, NPC Career and Technical Education; Tamara Martin, NPC Apache County Coordinator; Kris McPherson, NPC IMO student, Lisa Aragon, NAVIT.

Bob Martineau opened the meeting with welcome to all participants.

Updated minutes were accepted with revisions – Ken has entered all the corrections/additions which were requested last spring, right after the last meeting.

Ann Hilliard – note taker for meeting.

**Page Enrollment** – Ken is still working with Page – IGA, facilities agreements still have lots of details to work out.

**Update on grants including Carl Perkins Equipment** – almost all E&I instructional equipment has been received; just lacking interfaces. Bob M. will follow up and find out the status of those.

**Update on coal handling** – Module is in development to replace current section of curriculum. Kim says we could use the existing fuel handlers module. Bob M. will contact APS Ops Trainer – Sean Nolden, who has put a coal handling module together; *Peggy – are instructional outcomes met in Sean's coal handling instruction?* Bob – yes.

**NCCER testing site** – part of new grant, must establish as part of grant objectives.

**Apprenticeship Programs** – Electrical/Instrumentation/Carl Perkins

**Job shadowing** – Bob has been promoting job shadowing in Apache County. Seems like lots of interest among students. Paul and Bob – one student did 8 hours job shadowing here at Cholla. Was so excited he wouldn't keep quiet in class.

**Headphones** -- Spence Wilhelm is configuring the 20 new ones, and Kenny will bring them over as soon as they are set up. Kim Finch – we have been using the same headphones and they make plant tours much more meaningful for participants.

**Electronics storage building in Show Low** – update – trying to schedule a time when we can get into the storage – props have already been taken out but still more stuff to go through and we think there will be lots of usable equipment.

**Enrollment Numbers** – Comparison between Fall 2011 and Fall 2012. Both Cholla and St. Johns NAVIT enrollment up slightly from Fall 2011. St Johns Maintenance enrollment down; Cholla Maintenance same; Electrical/Instrumentation enrollment up by 1 student.

**Peggy -- TAACCCT Grant/Mechatronics.** NPC is part of a 5-college consortium which has just been awarded a \$13.4M grant to train students for energy sector. Stackable credentials for technician up to engineering jobs. Department of Labor only awarded 27 state grants. Cohort of students we will start next fall. Lots of things that need to happen between now and next fall. We will have lots of assessment tools we have not had before. This is through the Center for Energy Workforce Development (CEWD). NPC will get almost \$2 million. Must move quickly to meet the guidelines. Majority goes the consortium lead, Estrella Mountain College in the Valley, but there are also 3 additional colleges (Chandler-Gilbert, Yavapai, Pima). Since we are rural we will have to have a cohort of students. We also fought for \$0.5 million for mechatronics instructional program/training equipment in the new Skill Center to be constructed in Holbrook. We are delighted but apprehensive. Allows us to hire 5 positions; includes coordinator, 2 faculty. Career coach, lab aide. Online testing to see where students meet credentials/outcomes and where additional work is needed. Not sure how many actual positions we will be adding but will definitely bring 2 new faculty positions on. Now we need to review the requirements and make our plans quickly. National

recognition will come our way, along with the opportunity for additional monies if this grant can demonstrate success. We plan to recruit a cohort to start in Fall 2013.

**New Skill Center at NPC Campus in Holbrook** – District Governing Board approved. Bid by Whitewater Construction was winning bid. Groundbreaking Ceremony will be October 19, at 12 noon. Please send Peggy names of company officials by October 10 so NPC President, Dr. Swarthout, can send out invitations. Many regional companies have partnered with NPC to donate materials and equipment to NPC so we want to also recognize industry partners, and celebrate the contributions to NPC and the community. For example, Welding recently received an unsolicited donation of \$5000 worth of pipe from Pipefitters Union, along with an email thanking NPC for the quality of graduates from the program; 10 NPC recent completers of the two-year program are currently enrolled as apprentices.

Bob -- I have a niece who went to the Show Low welding program – she is 23 years old and has gotten a job with an aerospace company welding exotic metals. She has gotten lots of recognition for her skills and is very excited to be doing this.

**Peggy – Pathways – associate to baccalaureate. ASU Transfers from Community Colleges** -- Dr. Maria Hesse from ASU met yesterday President Swarthout, VP Mark Vest, and Dean Belknap regarding the newly restructured Pathway from community college to a baccalaureate. This is an AAS feeding into a Bachelor of Applied Science. Webpage – [www.asu.edu](http://www.asu.edu) Click on *Join as future student*. We have a page for NPC. There's also a shortcut on the NPC page to the ASU transfer page. Prospective students could select ASU online classes, veteran, or other specific characteristics. Then select Transfer Admission Guarantee Programs (TAGS). NPC and ASU have aligned curricula so that students may transfer from NPC, with an associate's degree, as a true junior with most or all of their credits being accepted into selected ASU programs. As an example, the Bachelor of Applied Science in Operations Management is articulated with the NPC Welding program.

New concept – block credit – student receives a block of 60 credits as a block transfer. Plus the possibility of 15 extra General Education (math, science, English, social sciences, etc.) from NPC. Typical baccalaureate is 120 credits. So if planned carefully student will be able to take all but 45 upper level courses at community college tuition costs while living at home. And remaining courses in some programs can be taken online. Program is open to alumni from several years back also, not just students going forward. Another example is the AAS/RN to Bachelor of Science in Nursing – NPC currently has 68 NPC alumni from the Nursing program enrolled in ASU's BSN program. Dr. Swarthout said yesterday that we need to get the word out to students, parents, that an AAS in Career and Technical Education is not an end point. Cost effective, makes efficient use of Pell funds.

**TEP has outage coming up** – hiring 5 positions. Include an IT Network person, entry level positions, Risk/Safety person.

Bob – wanted to demonstrate an application called **ProTRAX** – if college wanted to purchase access to the program. Demonstrates controls for turbines, boilers. Could be set up where could practice at home. Simulates start-up, fires up unit. Simulates the display that would be visible in the control room of a powerplant. Would be used for almost all Operations courses. It's hard to do much in the classroom on those units other than talk about them. This allows user to go through procedures on computer, and receive feedback/assessment on their performance. Can use on a pad.

Web demo from Keith Mann of ProTRAX. ProTRAX Cloud is a training management and simulation service, targeted for power plant operators. Currently in private beta development phase, commercially available in November 2012. *Question: are certificates of completion accredited by any outside agency?* Keith – not at this time but we are looking into that. Windows 7 and MS Explorer 9 will be required for initial commercial release in November 2012. Cost per student is variable – traditional customer of our company, such as a powerplant, may need whole year’s access. College may not need full year. The more seats you purchase per user the less per seat. Market list price – one person for one year approximately \$2900. If a college needs access for 30 day window, depending on access needed and number of students at once, can customize price. Industrial customers pay \$700,00 to \$1 million per year for a simulation. *What about if instructor just wanted to use in classroom for demos?* Ans: Each instructor would need to have a seat. *What about 3 month access?* Ans: Would need to evaluate numbers. I can get back to you if you send an email outlining the ideal needs for your school. Bob – will discuss and send you an email.

What is the comparison between ProTRAX and Automation Studio? Automation Studio is a design tool with all types of mechanical and electrical options. This is a simulation tool that would give NPC students a better look at what the control room operators see and do. Kim – it would be nice to have on a pad and walk around the plant and see the equipment operations.

Lisa – *are there going to be any overlapping competencies between mechatronics and current IMO?* Ken – yes there will be overlap. Peggy – There are eight tiers of skills, starting with personal effectiveness, then academic competencies, job competencies, technical competencies, all the way up to graduate engineering degrees. The community colleges will focus on levels up to tier 5, which is the associates degree level. Bob M. – The mechatronics lab will bring in a little operating system, you can fire it up, open and close valves, take actions and see what happens. Similar to what’s taught in an apprenticeship program. High school students who love messing with equipment will find it very interesting. Robotics is part of mechatronics. If we have equipment for advanced students in the skill center/lab beginning students see the usefulness of what they’re learning and are motivated to achieve the levels needed to use the equipment.

Kim – At our plant we will be bringing in 6 new people in latter part of October. Plant manager now requiring new hires have to have all 5 semesters of NPC IMO program, based on good outcomes of last hiring cycle with NPC folks.

Monday, Tuesday, Wednesday nights at Cholla have many courses taking place in same space due to refurbishing of the class labs and space. Making steady progress on the remodeling. Hope to have whole facility redone by mid-October. Bob M. will let Kenny know when computers can be re-installed.

APS is hiring -- 7 production specialist positions are in the selection process. Might be taking 7 E&I technicians as well. Around 700 applicants for 20 total positions.

Finally getting some movement, taking people who have been through our program. Of course other skills are important too. Kenny will give demo timed MOSS/POSS – aptitude test for conceptual thinking, spatial aptitude, reading comprehension, leverage, etc. Timed tests.

Next meeting TBD. May need a meeting later in fall to review new grant requirements and obtain input from power plant partners. Kenny Keith will let us know in the next couple of weeks.