Natural Gas Advisory Committee

June 27, 2019

Meeting Notes

DCNR Update – John Norbeck and Ellen Shultzabarger

- Budget
  - Budget in progress in legislature includes "cost to carry" for DCNR = same level of service we provided last year
  - Keystone fund is getting $30 million increase in final budget, relative to original budget proposal. This is because some operating costs are being funded by the General Fund rather than the Keystone Fund. This frees up the Keystone Funds for their typical use on recreation infrastructure, acquisitions, and other natural resource projects.
  - DCNR has lost 156 positions over last 4 years. We are getting 12 positions back in this budget. It looks like 4 will be going to Bureau of Forestry, 5 will be going to State Parks, 1 to Bureau of Recreation and Conservation, 1 will be a climate adaptation applied science position in the secretary's office, and 1 to Facility Design and Construction.
- ROW Mitigation
  - Traditionally, mitigation process is separate in Forestry and Parks.
  - Looking to be more transparent and consistent for all DCNR lands.
  - Parks has been developing a tool, and it was originally thought the same tool could be used for Forestry, but we now think that differences in land management could drive differences in mitigation models.
  - We are in process of developing an RFP to bring on a consultant to work through differences and set up tool or tools for future use.
  - NGAC can play an important role in evaluation and development of that tool.
  - We'll provide more information in the fall on the RFP process. Forestry will be status quo for foreseeable future. For Parks, tool should be ready to use this fall.
- State Forest Land gas development statistics provided as a handout – provided on website
- Shale-gas Monitoring reporting will proceed with a StoryMap (ESRI product). This will allow interactive maps and data presentation. It will be more interactive than a typical static document, such as the past reports. This will allow more frequent updates of data. It should be up in next 6-9 months. We may be able to present at the fall meeting, or else will send an email when its ready.

PA Legacy Well Data and Regulation – Harry Wise

Powerpoint slides provided on website.

Question: What happens to wells not in DEP database?

Answer: Newly found wells will get added.

Added DEP comment: Homes impacted by legacy wells becoming nearly valueless and a danger to live in. Mitigation systems can be highly costly, 10s of thousands or even over 100,000 dollars.

Added DEP comment: DEP would not issue a drilling permit if an unconventional drilling company identified a legacy well in their Area of Review that could communicate with the fracturing.

Industry member added that no responsible drilling company would want to fracture when such communication was possible.

NGAC Member Comment: The amount of unfunded liability for legacy wells in DEPs database ($280M), is about the same amount that's going into the PA Rainy Day Fund, and also coincidentally around the same amount budgeted for the Chesapeake Bay WIP.

NGAC Member Comment: Until there are some major catastrophes, unfortunately this may not get the attention it deserves. What is the probability of a big disaster? Because people aren't going to act until they are forced to act.

Answer: There's a water flood project in the Allegheny NF. There are wells about every 400 feet, and the company has totally walked away. This is something that could be highlighted as a problem. Operators are walking away from 1000s and 1000s of wells with no intention of plugging them. Laws preventing transfers of wells and bonding and minimum production are very weak in PA. This is an international issue. Every jurisdiction in North America is dealing with this issue.

NGAC Member Question: What is the Interstate Oil Gas Commission doing about this?

Answer: Other states, with severance taxes, have more funds to address this problem. But even then, the funding has not been sufficient. We have to do things differently than we have in the past. Even if it's a modest tax on consumers to raise money to address the problem. DEP has been successful in piercing the corporate veil on a few companies and hold owners personally liable for plugging responsibilities.

Legacy Well Detection Technology

Powerpoint slides provided on website.

Remote sensing technology of legacy oil and gas wells is based on magnetic signature of vertical steel well casings.

Question: Is NETL still involved in methane studies?

Answer: Continuing to do methane studies in Oil Creek State Park and in Oklahoma. Still in early stages, not sure there's anything published yet.

Industry: Past, Present, and Future with Legacy Wells

PGE – Nathan Harris

Powerpoint slides provided on website.

Question: What is the rule about what is done when a well is found within the Area of Review?

Answer: Within 500 feet, monitoring is required at the surface. Its up to the operator to determine how to control effects of their fracturing.

Question: Does PGE have any philosophy on ensuring that its Marcellus development doesn't become a legacy problem in the future?

Answer: This haven't been given that much thought; however, when wells don't meet a production threshold then PGE plugs them.

Commentary: When wells age, they tend to change hands – divestitures. DEP has mentioned some changes in the law that would hold all entities that owned a well over its history responsible. Plugging of Marcellus wells and reclamation of pads is going to be considerably costlier than plugging conventional wells.

Comment from PGE: They have been able to work out arrangements with townships to take stone off pads for free as part of pad reclamation process.

Seneca – Doug Kepler

Seneca had 2700 shallow wells when they moved into Marcellus. The portfolio of shallow wells produced comparable gas to one unconventional Lycoming County well. So they divested most of them to Diversified. Post divestiture, they kept 400 shallow wells, and have plugged 300 of those at an average cost of 70,000 dollars/well. They also plugged about 50 unconventional wells, which also cost an average of 70,000 dollars/well, although some cost in excess of 100,000. That average cost includes about 10-15,000 in E&S and final grading to reclaim site.

Seneca contracts the plugging activity – they have 4-5 companies that they contract for it.

DEP comment: There are only about 8-10 specialized companies in the Marcellus basin that can plug deeper wells over about 4,000 ft. There are more smaller operations, especially in the northwest, that can plug shallower wells (2,500-3,500 ft).

General Commentary on Legacy Wells

Question: Is this problem going to proliferate in future with new development?

Answer from Forestry: On our land where we have leases, we have plugging bonds on file (25k) and general bonds of (100k). We aren't sure if that will be enough or not. On severed lands, we don't have these sureties.

DEP Comment (Scott): Diversified company has 23,500 shallow wells previously under a singly 25,000 bonds, they recently put up $7 million bond. The laws are set up for the transfer of wells to more marginal producers, even though that flexibility in the law is not really the reality of the needs of the energy industry today. The laws were set up during a different energy extraction scenario. The NGAC Chairmen is probably that correct that it will take a catastrophe for significant policy action to occur. We probably need to disincentivize holding onto marginal wells. A solution needs to be arrived at collaboratively with oil and gas industry, because the industry has the resources

Forestry Comment (Teddy): $35 million bonding is held for every well in PA, held by DEP as regulators. That's grossly inadequate. Forestry holds $52 million for its 1200 wells. (Ask Teddy.)

DEP Comment: Bonding levels have been rolled back twice in recent years. Legislature will not likely allow straightforward increases in bonding levels. We need to find a creative solution to this problem.

DEP Comment: It will take us 17,000 years to plug all the legacy wells at the rate we are going.

Committee Sharing

Game Commission – shared statistics on handout of their development numbers (handout on website)

Question from Member: With these development statistics, how much of the already leased acreage is developed? It would be interesting to know this.

PGC and BOF both said they could provide that information in the future. Rule of thumb for Forestry is we are about 30-40% developed.

New Topics Proposed

Stromwater Management

Whatever DCNR needs advice on – ask DCNR staff to answer this question.

Consumptive water use