

**ALASKA STATE LEGISLATURE  
HOUSE SPECIAL COMMITTEE ON ENERGY**

February 27, 2020

10:16 a.m.

**MEMBERS PRESENT**

Representative Grier Hopkins, Chair  
Representative Ivy Spohnholz, Vice Chair  
Representative John Lincoln  
Representative Zack Fields  
Representative Tiffany Zulkosky  
Representative Mike Prax

**MEMBERS ABSENT**

Representative George Rauscher

**OTHER LEGISLATORS PRESENT**

Representative Mel Gillis

**COMMITTEE CALENDAR**

PRESENTATION: PETROLEUM FISCAL REGIME PLANNING

- HEARD

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

CHRISTINA RUGGIERO

IN3ENERGY

Houston, Texas

**POSITION STATEMENT:** Presented a PowerPoint on Petroleum Fiscal Regime Planning.

RICH RUGGIERO

IN3ENERGY

Houston, Texas

**POSITION STATEMENT:** Presented a PowerPoint on Petroleum Fiscal Regime Planning.

**ACTION NARRATIVE**

[10:16:26 AM](#)

**CHAIR GRIER HOPKINS** called the House Special Committee on Energy meeting to order at 10:16 a.m. Representatives Hopkins, Prax, and Lincoln were present at the call to order. Representatives Spohnholz, Zulkosky, and Fields arrived as the meeting was in progress. Also in attendance was Representative Gillis.

**Presentation: Petroleum Fiscal Regime Planning**

[10:16:56 AM](#)

CHAIR HOPKINS announced that the only order of business would be a presentation on Petroleum Fiscal Regime Planning.

[10:17:21 AM](#)

CHRISTINA RUGGIERO, IN3ENERGY, presented a PowerPoint on Petroleum Fiscal Regime planning, directed attention to slide 3, "Petroleum Policy & Scenarios," and stated the importance of goal setting to understand the direction headed. She pointed out that, as this was done by oil companies and other industries, governments had to understand that "their field of play is going to change, the market conditions are going to change." When goals are set and met in the state, this would encourage continued success. She reported that this discussion would be for how the big energy companies ensured their success in a changing world and how that could look in Alaska if the same policy was adopted.

[10:18:46 AM](#)

RICH RUGGIERO, IN3ENERGY, addressed slide 4, "Petroleum Policy & Scenarios," which read in part:

Scenarios enable executives and other decision makers to open their minds to previously inconceivable or imperceptible developments.

MR. RUGGIERO added that scenario planning offered time for people to determine how prepared they were should this happen. MR. RUGGIERO pointed out that, in the past 40 years, a lot of things had happened in the oil industry that were not expected.

MS. RUGGIERO moved on to slide 5, "Plan for or creating a Future," which read:

Successful enterprises have clear, widely understood goals and regularly monitor progress and make implementation corrections as necessary

MS. RUGGIERO acknowledged that it was not known what the future would bring and that known factors could change. However, it was known where the state wanted to be and where it was headed, with a plan in place that could withstand any changes between now and the future. She shared a quote: "If you don't know where you are going, any road will get you there."

MS. RUGGIERO shared slide 6, "Preventing Unexpected Consequences," noting that it was necessary to be more proactive and anticipate the unexpected versus just being reactive. She stated that a key to scenario planning and long-term strategic planning was to allow yourself not to be in a position that was constantly reactive to things that were not planned. She offered examples of the results from the dramatic fluctuation of oil prices and of the oil exploration credits, difficult scenarios to which the state had to react. She pointed to the benefit of scenario planning in preparing for these.

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CHAIR HOPKINS asked whether the State of Alaska had used scenario planning in past years during discussion of oil revenue.

MR. RUGGIERO explained that everyone would "run ya lots of numbers" and put up charts and lines for what would happen. However, it was necessary to change the cost structure when running these numbers. He offered an example for an unchanging cost structure, noting that it was necessary to compare oil price and profit per barrel. He shared that these were too often used interchangeably even though "they're nowhere near the same thing." He shared the memory of a moment near the end of the Alaska's Clear and Equitable Share (ACES) special session when there were very diverse opinions for what should be done. At that time, they had listed five goals and then utilized the ACES structure for how it would fit to each of these. He allowed that the state as a sovereign could choose whatever strategy it desired, even as each could carry a different fiscal policy with its inherent pros and cons. From this point, the state would then create a fiscal policy to make this happen as best as possible.

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REPRESENTATIVE SPOHNHOLZ asked about the difference on impact between carry forward credits and carry forward losses.

MR. RUGGIERO offered an example using a 35 percent flat tax and a carry forward loss of \$100. Using either the loss of \$100 or the \$35 tax credit would have the same net effect on taxes in the year they were carried forward. However, when the system created the credits at the 35 percent rate, there were per barrel credits that offered an effective tax rate well below 35 percent. With this system, when carrying forward credits at 35 percent, as the tax rate may not be 35 percent in the future, this would shield more income from tax than if the loss was carried forward. He offered his belief that this was the reason the carry forward tax credits were changed to carry forward losses.

REPRESENTATIVE SPOHNHOLZ asked whether the per barrel tax credit distorted the way the credits worked.

MR. RUGGIERO replied that this was an unintended consequence, as there was a reason for the per barrel tax credits. He pointed out that with a multi-faceted tax system, such as the Alaska oil and gas tax system, making a change in one area could have an unintended consequence in another area.

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REPRESENTATIVE PRAX shared his observations during the Alaska's Clear and Equitable Share (ACES) debate, noting that it appeared that "a lot of people were looking in the rearview mirror as they were trying to go forward."

MS. RUGGIERO explained that costs varied in a base case pricing structure when price and demand increase, as the utilization of the resources would become constrained. When the price drops, the producers would tell the service companies that they did not have the margins to pay. Although there was a lag, the prices and costs would grow and change together.

MR. RUGGIERO shared slide 7, "Constant Challenge: What is Fair Share," and reported that fiscal policy had a lot of factors to consider, including geo-political risk, weather, government events, supplies, market factors of pricing, and resources in the jurisdiction. She declared that there was no way to define

an exact number for fair share, much less how that would apply over decades. She explained that a fair share was a holistic view of several components or factors in a system and then asking whether that share met the state goals and still allowed the oil companies to make enough profit to maintain a competitive environment.

MR. RUGGIERO read from slide 7, "What once applied, or was once believed, likely can no longer be relied upon." He shared that the Prudhoe Bay reserves were initially one third of U.S. reserves, which this percentage had been maintained for another two decades. However, at the end of 2018, these reserves only accounted for about 5 percent of U.S. reserves and he opined that this could drop to about 3 percent by the end of 2019. Specifically, for North American reserves, Prudhoe Bay reserves had dropped from 20 percent to less than 1 percent. He pointed out that, as huge resources were being discovered in many places, Alaska's resources percentage had dwindled, and Alaska no longer had so much to offer. He emphasized that it was necessary to put the competition and the external factors in context, directing attention to the effects from the shale revolution, in order to determine what was fair share and what direction Alaska should pursue.

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MS. RUGGIERO introduced slide 9, "Global Energy Industry," stating that the energy industry was constantly changing in terms of technology and opportunities for investment and that the playing field was very open across the globe. She declared that it was necessary to devise fiscal systems that could withstand these changes.

MS. RUGGIERO directed attention to slide 10, "Two Decades of Price Volatility," which depicted countries that had made a change in fiscal policy to increase the government take and which countries had offered fiscal incentives. She shared that there were reasons why each jurisdiction chose to put forward incentives or increase government take. She pointed out that in areas where prices increased, the government take also increased; whereas, in areas where prices decreased, governments increased their incentives. She declared that change itself was not necessarily bad, as change happens all over the world, even in countries viewed as very stable investments. She pointed out that changes in the direction of the market created a more stable investment climate and was helpful for both the producers and the investment climate jurisdiction.

MR. RUGGIERO, in response to Representative Fields, explained that the [vertical] axis was the price of oil.

CHAIR HOPKINS noted that Alaska had changed its oil fiscal regime seven times. He asked if the points on the graph were smaller tweaks that reacted more nimbly to the market.

MR. RUGGIERO shared that the one country which had changed its fiscal system more than any other was the United Kingdom. However, in rankings for the most stable place to do business, the United Kingdom was never lower than number 3. He stated that the United Kingdom always moved quickly and in the same direction as the market. As the market fell, they would "get rid of royalty, they would get rid of their production tax, they would put in drilling incentives, they'd do everything." As the prices ramped back up, they would return all of these to the system as this was an opportunity to take their share. He pointed out that the United Kingdom was aware "that energy was key to keeping their economy going and to keep the country going, and they liked the idea of being able to develop and produce as much domestic energy as they could so therefore they had a very quick and responsive policy."

CHAIR HOPKINS asked whether there was an underlying tax that allowed for that nimble response.

MR. RUGGIERO explained that the basic pieces were income tax, a production tax, spending incentives, and royalties. "They just played with those four levers, predominantly."

[10:43:01 AM](#)

MR. RUGGIERO spoke about slide 11, "There is no single Ideal Structure," and stated that the optimum fiscal system did not exist. He reported that governments would design contracts under production sharing arrangements or legislation under a tax and royalty regime even as there would still be changes and the search for "a sweet spot." He stated that there was not a lot of consistency for how to produce the reservoirs as the government needs and philosophies varied. He emphasized that the ideal structure did not exist to meet these varied needs. He shared that it was necessary to work with a government to find out what was wanted, and then review potential scenarios for help with the design of a fiscal system that fit those goals.

MR. RUGGIERO paraphrased from slide 12, "Testing Policies and Goals," which listed the different decisions that a state needed to review, and read:

Fiscal design should start with a set of agreed policies or goals

- Some typical drivers of government fiscal policy design include:
- Fill short term revenue needs
- Build multi-generational wealth
- Short on reserves - emphasize drilling
- Long on reserves - bring in industry, bring on production
- Provide affordable/discounted domestic energy supply
- Grow associated industries (e.g. Petrochemical, Power)
- Create long term jobs
- Create a national oil company, build self sufficiency

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MS. RUGGIERO shared slide 14, "Historical Scenarios," which read:

- With 2020 hindsight we can generally describe the main drivers of change to the energy industry in the past 5 decades
- 1970s - The emergence of OPEC, tight oil supplies, deregulation of government pricing controls
- 1980s - Unbridled activity, resulting supply surplus, end of cold war, surviving \$20 oil prices
- 1990s - Liberalization, globalization and massive opening of previously closed countries to outside investment
- 2000s - Talk of climate change, dash for gas, private equity financing, oil/gas price parity disconnect
- 2010s - Environmental focus and the shale revolution

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REPRESENTATIVE FIELDS asked about the impact talk of climate change or an environmental focus had on exploration, production, or prices. He asked whether the small, regional greenhouse gas marketplaces were sufficiently large enough to impact the price.

MR. RUGGIERO reflected that the impact of climate change on the oil and gas industry, with movement of the various credit markets, was a much larger discussion. He stated that it was necessary to consider this environment when moving forward with a policy, declaring:

the real conundrum of everyone who's in this business of scenario planning and whatnot today is it's a growing market for the next decade at a rate that's pretty substantial while at the same time everyone's planning because the grassroots movement on the green is growing stronger and stronger and the fear is that when the day comes when the green takes over from the growth it's gonna fall off the cliff pretty fast.

MS. RUGGIERO added that the climate change discussion was here to stay as it was no longer just about oil company production but included who was the end user of that production. She said that the discussion centered around where the demand was going to come from and the supply mix of energy to meet global demand. She pointed out that different sectors of the world were able to move more quickly to alternative renewable energies because of cost or government policies.

REPRESENTATIVE FIELDS asked about the Baker-Schultz presentation in Anchorage which contended that, with relatively energy efficient production in Alaska, the state may fare relatively well in a carbon constrained environment.

MR. RUGGIERO said that he was not familiar with this.

CHAIR HOPKINS asked whether this had been the carbon dividend discussion.

REPRESENTATIVE FIELDS added that Norway had declared itself to have the lowest carbon footprint of the large oil development areas.

MR. RUGGIERO shared that the real technological step change achievements in the upstream always came when prices had fallen, and survival was about innovation. He offered his belief that both the upstream and the service sector were conducting a lot of research to be prepared for when there were tighter controls and restrictions.

CHAIR HOPKINS asked for more information.

MR. RUGGIERO reported that, as the leadership of British Petroleum had proposed to be net zero by 2050, that organization would gel around this proposal. He added that Baker-Hughes was converting its fleets to compressed gas or LNG, for a 40 times reduction of carbon emissions.

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MS. RUGGIERO paraphrased from slide 15, "Scenario Planning," which read:

- Scenario planning is used by businesses to test the resilience of strategic plans against a range of possible future outcomes
- Many energy companies use scenario planning to be prepared for global developments that can drive energy systems
- These scenarios are "stories of the future", developed by taking into account analyses of many factors:
  - Market fundamentals
  - Technology development
  - Geopolitical policies
  - Human resource availability
  - Energy resource availability
  - Changing consumer behavior

MS. RUGGIERO moved on to paraphrase slide 16, "Scenario Planning," which read:

- Three prominent energy companies post their scenario planning and thinking online
  - BP
  - Shell
  - Equinor (previously Statoil)
- Depending on the entity, it is not uncommon to see anywhere from 1 scenario with significant sensitivities to as many as 4 scenarios considered
- Additionally, government agencies such as the EIA and IEA publish their future industry scenarios on an annual basis

- These detailed, well-researched, well documented data-driven reports provide a window into the general thinking of the industry

MR. RUGGIERO added that reviews had previously been static but were now fully interactive for access to the data with tools to plot the data.

MS. RUGGIERO shared slide 17, "Scenario Planning," which read:

- Although many companies and agencies publish annual scenarios, there is a degree of commonality
- Currently, there is one main theme presenting the biggest challenge to the industry and economies today
- On the one hand there is a global recognition of a continually growing demand for more energy supply,
- While simultaneously faced with a global movement to rapidly reduce carbon emissions
- The challenge: "decarbonizing while meeting increased demand"

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MS. RUGGIERO moved on to slide 18, "Published Scenarios," which depicted a publication by Shell Oil for various scenarios as well as lenses on the future and future cities. She pointed out that the Sky scenario included a video and addressed the various technology innovations necessary to reach the climate goals aggressively and on time.

MS. RUGGIERO pointed to slide 19 "Published Scenarios," and spoke about the Exxon Mobil "Outlook for energy," which addressed future demand and supply and was used for the Exxon Mobil long term business strategies, research programs, and investment plans.

MR. RUGGIERO added that, with a publicly listed company, it was possible to combine these published scenarios with their analyst presentations to get an insight for the direction of the company.

MS. RUGGIERO addressed slides 20, 21, and 22, "Published Scenarios," which focused on the British Petroleum (BP) annual

energy outlook. She shared that BP had a huge database that was interactive and allowed for the creation of charts and analysis. She reported that the base case scenario was "Evolving Transition." She shared that the scenarios addressed countries which were raising their standard of living and would need more energy, as well as other tangents to address issues in the future. She spoke about a global single-use plastics ban and its effect on oil demand and any disruption to the market. She added that a global health crisis could affect globalization, change supply and demand, and impact trade.

MS. RUGGIERO spoke about the different approach by Equinor for its three annual scenarios, slide 23, "Published Scenarios." She added that Equinor would tweak these three scenarios for renewal, rivalry, and reform. She explained that the reform scenario was more of a status quo, with a slower advancement of technology, whereas the rivalry scenario reflected geo-political issues and events. She stated that the renewal scenario was the "big, go green."

MS. RUGGIERO shared slides 24 - 25, "Published Scenarios," stating that these scenarios were released annually in a report titled, "Energy Perspectives." She paraphrased slide 24, which read:

- Equinor releases the scenarios in an annual report called "Energy Perspectives"
- It includes extensive background analysis and support, all of which is published free to the public
- This report is recognized globally, and used in many conferences and global forums to discuss the future of energy and the global economy

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MR. RUGGIERO introduced slide 27, "Published Scenarios Comparison," and stated "this is sort of where the scenario rubber meets the road." He explained that Equinor plotted reform, renewal, and rivalry along with global oil and gas demand for each scenario. Equinor also used other company projections for its graph plots of the future demands for oil and gas. He pointed out that the projection for gas continued to grow even under a "green" scenario. He suggested that Shell Oil was very robust in its projections for gas demand with a conversion under the "green" scenario because the emissions reductions were quite significant.

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REPRESENTATIVE FIELDS asked for the percentage of oil used for the transportation sector.

MR. RUGGIERO reported that if this included airplanes, locomotives and everything, it was about half.

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REPRESENTATIVE LINCOLN asked whether Equinor had applied probabilities to the various scenarios.

MR. RUGGIERO replied that he did not know how they arrived at the scenarios. He shared an anecdote for how he applied the metrics into his analysis and stated that he did build in some probabilities.

[11:10:17 AM](#)

REPRESENTATIVE PRAX asked how often companies reviewed the changes in the market.

MR. RUGGIERO replied that this was dependent on the company. He shared his personal experience for a quarterly review of the goals and directions taken and how well these were working.

REPRESENTATIVE PRAX asked how often a North Slope producer should review its position in the market.

MR. RUGGIERO explained that Alaska had a long lead time, and he referenced the hockey stick of investment. In Alaska, most of the money was spent prior to extracting the first barrel of oil. He shared that the opportunity for an "off ramp" was reviewed often.

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REPRESENTATIVE SPOHNHOLZ asked about the intersection of cost and demand in order to maximize the value of the resource.

MR. RUGGIERO replied that this was not about prices, but about the profit for Alaska. He shared that he was a supporter for net taxation over gross taxation, as gross taxation did not reflect the wealth created. He declared that wealth was not the value in the marketplace, or the gross revenue, but by financial definition it was the income or profit created.

REPRESENTATIVE SPOHNHOLZ offered her belief that the use of a net profit approach could lead to inflated cost deductions by the producers which reduces the overall take by the state.

MR. RUGGIERO stated that there was not a tax system in the world that smart people could not find a way to maximize, pointing out that tax systems had designs which allowed for maximizations. He declared that the simpler the system, the less chance for unintended consequences. He said there would always be an argument in net taxation for whether a cost was justified. He reported that compensation was always based on how well the cost line was managed.

REPRESENTATIVE SPOHNHOLZ asked about a way to ensure maximum value while attracting development. She asked about a system with the simplicity to reduce the amount of gamesmanship and reach the intended outcome.

MR. RUGGIERO replied that there were pros and cons for the use of both net taxation and gross taxation. He reminded the committee that this depended on the goal. He offered examples for the results of different goals and directed attention to slide 32, "Defining the Goal." He paraphrased the slide, which read:

- Seems to be consensus that gas demand will continue to grow considerably over the next decade plus
  
- Because of lead time, Alaska would need to act now
- Need to capture dedicated market
- Significant upfront capital costs
- Economics driven by early cash flows
- 30 to 50 years of robust cash flow
  
- What "policies" could be put in place?
- Use as anchor to keep North Slope going for decades to come
- Minimal government take in first 10 years or so
- High government share of profits next 30 to 40 years
- Job creation and increased slope activity
  
- This is just one example of how a state goal matches up with consensus scenario and a plan to get it done

MR. RUGGIERO suggested that this approach for keeping the North Slope alive and maintaining aggressive gas growth because of the

movement from liquids to natural gas would mean the state still has a huge, known, readily produced gas supply. He suggested a policy to take no tax for 10 years while it was being built, but with a huge tax on the backend. This would bring the jobs and create additional revenues to help pay for the fixed costs on the North Slope, as the liquid natural gas (LNG) projects usually lasted for several decades. He pointed out that although the state would be a contributor and not get revenue in the beginning, it would get all this revenue back in the future as one of the goals was multi-generational wealth. He acknowledged that although there was only so much of the resource, it was still necessary to get it out of the ground in order to get value.

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REPRESENTATIVE FIELDS asked about the internal rates of return that were publicly available for the continued use of the legacy fields versus shale oil in West Texas.

MR. RUGGIERO explained that the true rate of return was determined from the beginning by reviewing all the costs and all the revenue generated. He offered examples for different purchase prices, equipment costs, and royalties.

REPRESENTATIVE FIELDS asked to compare the investment costs today for rates of return.

MR. RUGGIERO explained that the spending going forward would be considered, and then the incremental economics for rate of return would be determined.

REPRESENTATIVE FIELDS asked about a comparison for the North Slope versus the other opportunities around the world.

MR. RUGGIERO relayed that he did not know the other opportunities. He spoke about the access costs to get in, which could vary widely across the globe. He expressed admiration for some companies which purchased leases from other companies when the market was in decline. He pointed out that the risk analysis came before the economics. Before the pursuit of a lease and development, it was necessary to have a sign off for the risk analysis which determined the ability to control costs in that environment and the chances that the government remained stable, among other risks. He reported that most companies had a risk matrix to address and discuss prior to approval for financing the opportunity.

REPRESENTATIVE FIELDS asked if there was a chart showing a worldwide spectrum of risk.

MR. RUGGIERO replied that this evaluation was company specific, as some companies were more comfortable with certain risks in certain regions.

[11:28:35 AM](#)

CHAIR HOPKINS reflected that the three example companies had used crowd source for information and scenarios. He asked about any governments which did scenario planning and whether any of these were available to the public.

MR. RUGGIERO shared that, although there were governments conducting scenario planning, he did not know whether these were published. He reported that there were bits and pieces published, often on a government oil ministry site, that offered some indications.

CHAIR HOPKINS asked what governments were similar to Alaska.

MR. RUGGIERO offered his belief that the question regarding other governments should be about the "journey to get where they're at." He offered an example of the journey by Australia from internal production to offshore LNG and gas. He pointed out that, as the global environment had morphed, so had Australia changed moving forward. He shared an anecdote about his company's representation of Iraq immediately after the war.

MR. RUGGIERO stated that the oil companies tried to imagine a future with a lot of different moving parts and directed attention to slide 28, "Published Scenarios," which read:

The US EIA (Energy Information Administration) designs a "Reference Case" each year as a future forecast

- They then take into account a number of factors to determine their "side cases". For 2020, some factors included are:
  - High and low price
  - High and low supply
  - High and low economic growth
  - High and low renewables costs

- It includes extensive background analysis and support, all of which is published free to the public
- The information is published annually through their "Annual Energy Outlook"

MR. RUGGIERO moved on to slide 29, "Published Scenarios," and stated that there was a wealth of free knowledge that had been compiled from millions of dollars' worth of consulting.

MR. RUGGIERO declared that that it was necessary to define the goal for the state in order to determine a fair share and he paraphrased slide 31, "Alaska Goal Setting," which read:

- Let's circle back - What is Alaska's fair share? It depends
- Alaska's fair share is the maximum amount it can take while achieving its goals
- It depends - what are the State's goals?
- Budget defined revenue generation?
- Keeping TAPS full?
- Bring NS discoveries online?
- Continued exploration?
- Harvest the slope?
- Promote unconventional shale and heavy oil?
- Attract new operators?
- Fuel new industry and commerce?
- Monetize North Slope gas?
- One or more of the above (or others not listed) could be combined to set the State's strategic direction

REPRESENTATIVE SPOHNHOLZ clarified that she had not specifically asked about the fair share for Alaska but was, instead, defining the natural tension.

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CHAIR HOPKINS asked whether there were other global places with a similar older oil field situation as Alaska and, if so, what scenarios, goals, and planning were being discussed.

MR. RUGGIERO offered examples of North Dakota, New Mexico, and Texas as places of early oil production in the U.S. in the

1930s, 1940s, and 1950s. He pointed out that these states were currently at the heart of revitalization with all the shale oil production, "a combination of the old and the new." He noted that these states had a combination of private royalty and state severance taxes, predominantly on a gross basis. He pointed out that Norwegian oil production was offshore and there was continuous oil drilling, whereas Alaska oil production was onshore, and the oil drilling window was less than 90 days each year. Norway could lay a pipeline on the seabed, whereas Alaska had to anchor stanchions through the permafrost to support the pipeline and then keep the pipes warm. He emphasized that, although there was not a comparison, Norway did have mature oil fields first developed in the early 1980s, similar to Alaska. He reported that the Norwegian fiscal system had no royalty, with a combination of a corporate tax and a special petroleum tax. He pointed out that Norway specifically allowed and encouraged new exploration by allowing an immediate write off for exploration against the existing production or by paying for the exploration if there was not existing production. He added that there were uplifts as credit toward production tax for certain spending. Even though the marginal tax rate was 78 percent, there were a lot of incentives to bring upfront cash to the producers to help enhance the project economics.

CHAIR HOPKINS referenced the slide depicting the ranking of government take with most of the capital going to places similar to Norway for exactly these reasons.

MR. RUGGIERO shared an anecdote for the high division of revenue percentage until certain economic metrics were met. He reiterated that it was necessary to ask why all the investment money was going there, pointing out that the headline tax rate was only a small piece, as the timing of take was more important for attracting producers than the rate of take.

CHAIR HOPKINS shared an example of the constant changes to the United Kingdom taxation. He acknowledged that, although the State of Alaska had changed its taxation often over the last few years, the important key factor was for credits and incentives. He declared that moving forward it was necessary to remember that "taxes are never bumper sticker statements."

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MS. RUGGIERO added that it would be good for the State of Alaska to speak with Hilcorp Energy Company for information on what was being done elsewhere, as Hilcorp had recently committed to

business investment in Alaska. She offered her belief that Hilcorp would be a great resource to speak with for potential and what was necessary for new things to be done in Alaska.

[11:42:41 AM](#)

MR. RUGGIERO shared slide 32, "Defining the Goal," and said that this was an example for a strategic goal to monetize the gas on the North Slope which could create a decades long cash flow for the state.

MR. RUGGIERO directed attention to slide 34, "Alaska Example Scenarios," and suggested to stress test any new tax policy on oil and gas against any of these scenarios, which read:

1. Slow uptake on climate change. Current price will slow shale development, once overhang works prices rise \$10 to \$20 but stay sub \$100 for a decade
2. Geopolitical uncertainty and volatility, energy security, patchy climate policies, prices rise to +/- \$100
3. Aggressive targets for the reduction of fossil fuels, support companies refuse to conduct business in the arctic, North Slope into harvest mode

If we were to go with the above type scenarios based on pretty wide industry consensus, then the challenge is to design a fiscal system that promotes growth (Scenario 1 & 2) but at the same time ensures a fair share in harvest mode (Scenario 3)

[11:44:40 AM](#)

REPRESENTATIVE FIELDS asked for an explanation to the first scenario that "once overhang works prices rise \$10 to \$20."

MR. RUGGIERO explained that this had happened several times when oil was priced at \$80 to \$90 per barrel, and there was a rush of shale oil development. He pointed out that this rush slowed down when the price per barrel was about \$60, and when it stayed down at this level, there was a supply "overhang" or more supply than demand. He declared that shale oil wells "fall off pretty fast" as about 80 percent of the reserves were produced in the first few years and without continual drilling the production would decrease toward the demand.

CHAIR HOPKINS asked for the definition to "overhang."

MR. RUGGIERO stated that overhang was more supply than demand.

CHAIR HOPKINS noted that the window for drilling in Alaska was dwindling because of climate change and the corresponding ability to have ice roads. He asked if the window would widen if Hilcorp did not do more exploration and instead used the existing infrastructure.

MR. RUGGIERO said that he did not know.

REPRESENTATIVE FIELDS offered his belief that oil was sufficiently profitable at \$60 barrel and companies would continue exploration and production.

MR. RUGGIERO said that it depends, for shale, on the acreage proximity to the "sweet spot." He added that pipeline transportation could be tight to move from certain places in Texas to the Gulf Coast refineries, and whether a company had confirmed space in the pipeline. He reported that robotic drilling allowed for rails to be set up for additional drilling in each direction. He added that it also depended on access to the rigs, access to the service companies, and export of the oil from that area.

[11:48:35 AM](#)

REPRESENTATIVE PRAX reflected that there was the world oil market versus each individual current situation which made it difficult to discuss in "bumper sticker terms."

MR. RUGGIERO reiterated that it was necessary to understand the source of the headlines. He pointed to the greater variability of the cost to operate in the Lower 48 versus that cost among operators in Alaska.

MR. RUGGIERO shared that the systems that stayed engaged were the ones that set their goals and then developed their policy to achieve those goals.

[11:50:22 AM](#)

REPRESENTATIVE FIELDS asked about the profitability of the cost to transport oil versus the profitability for the remainder of oil.

MR. RUGGIERO said that he did not know.

REPRESENTATIVE FIELDS suggested there was high profitability for the transport of a barrel of oil, while the rest of the profit for a barrel of oil was sold closer to the cost of production. He suggested that the cost of transport was driving the market.

MR. RUGGIERO suggested to review the different products from a barrel of oil even though this would have to be compared against the cost.

CHAIR HOPKINS reflected on the climate change impacts for fossil fuel energy demand and asked what percentage of a barrel of oil went to power production globally.

MR. RUGGIERO said that every country that could was moving away from liquid fuels for power generation, even as some could not. He estimated that the global percentage was very small.

[11:52:49 AM](#)

REPRESENTATIVE FIELDS asked what percentage of gas demand was driven by electricity generation versus fuel for vehicles. He asked about the anticipated growth for vehicle fuel.

MR. RUGGIERO shared an anecdote about his work on a project in the 1980s studying natural gas for fleet vehicles and the resulting natural gas shortage.

[11:55:18 AM](#)

MS. RUGGIERO offered to research any unanswered questions from the committee.

[11:56:33 AM](#)

#### **ADJOURNMENT**

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 11:57 a.m.