## STAFF REPORT

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| **Agenda Item:** | 11 | **Name:** | Jake Tracy |
| **Proposed No**.: | 2022-0258 | **Date:** | January 24, 2023 |

**SUBJECT**

Proposed Ordinance (PO) 2022-0258 would add financial responsibility[[1]](#footnote-1) requirements for privately owned fossil fuel facilities and non-hydroelectric generation facilities in unincorporated King County.

**SUMMARY**

In 2020, the Council adopted regulations for fossil fuel facilities and non-hydroelectric generation facilities as part of the 2020 Comprehensive Plan update. At the same time, the Council added a Comprehensive Plan Workplan Item directing the Executive to study the use of various financial assurance mechanisms to protect against explosions, leaks, and other risks relating to these facilities, and to make recommendations on how the County could implement such mechanisms.

PO 2022-0258 would carry out the recommendations of the Executive's study by adding

financial responsibility requirements for privately owned fossil fuel facilities and non-hydroelectric generation facilities in unincorporated King County. The facilities would be required to carry financial responsibility adequate to cover the costs of an explosion resulting from a worst-case release, and fossil fuel facilities would also be required to carry financial responsibility adequate to address any cleanup at time of facility decommissioning. The adequacy of the amount of financial responsibility would be determined during initial permit review, and would be verified every five years thereafter.

Because state law does not allow counties to impose financial guarantees on state or local governments as part of permitting, these regulations would not apply to fossil fuel facilities or non-hydroelectric facilities owned or operated by state or local governments.

**BACKGROUND**

**Moratorium on Fossil Fuel Facilities.** On January 1, 2019, the King County Executive transmitted a proposed Scope of Work for the 2020 Comprehensive Plan update that included direction to "review Comprehensive Plan policies, and associated development regulations and permitting processes, to ensure that the range of impacts from the extraction, processing, production, transport, storage, and use of fossil fuels, including the impacts from construction and operation of fossil fuel infrastructure, are identified, avoided and mitigated, in order to protect public health and safety, air and water quality, habitats, natural resource lands, and other resources and functions."

Later that month, the Council adopted Ordinance 18866 ("the moratorium ordinance"), which established as six-month moratorium on acceptance of applications for new construction of, or expansion of existing, major fossil fuel facilities in unincorporated King County. The moratorium was adopted pursuant to the Shoreline Management Act, RCW 90.58.590, and the Washington state Growth Management Act, RCW 36.70A.390, and the required public hearing was held on March 13, 2019.

The moratorium ordinance directed the Executive to study fossil fuel facilities and associated laws, regulations, and policies, and to make recommendations for changes to the King County Code as necessary for the regulation of such facilities in unincorporated King County.

**2019 Fossil Fuels and Facilities Study Report.** The report required by the moratorium ordinance ("2019 report") was transmitted to Council in July 2019,[[2]](#footnote-2) but as the proposed changes to policies and regulations were not adopted until the passage of the 2020 Comprehensive Plan Ordinance, two additional six-month moratorium ordinances were adopted in the interim.[[3]](#footnote-3)

The 2019 report found that fossil fuel facilities did not fit neatly into any the County's code at the time, and thus recommended defining the term and adding regulations specific to those facilities.

Among other things, the moratorium ordinance asked the Executive to "review performance and maintenance guarantee procedures and recommend any changes deemed necessary for major fossil fuel facility uses." The 2019 report did not recommend the use of financial guarantees, as explained in the excerpt below:

"Through the review process, the County determined that while financial guarantees may be effective during the initial construction process, they do not provide long-term protections from unintended events such as a spill or explosion over the operating life of assets. Based on the review, the draft Comprehensive Plan update includes amendments to establish a Periodic Review Process for fossil fuel facilities, similar to the periodic review process for required in King County Code, Title 21A.22 for mineral extraction. This is to ensure that that the facilities remain in compliance with their permit conditions and that the most current operating standards are applied."[[4]](#footnote-4)

**Current Fossil Fuel Facility and Non-hydroelectric Generation Facility Code as Adopted through the 2020 Comprehensive Plan Update.** The transmitted 2020 update to the King County Comprehensive Plan and associated code changes ("2020 update") included the Executive's proposed amendments to fossil fuel policies and regulations, including establishing new use categories in King County Code (K.C.C.) 21A. The regulations and policies were amended during the Council review process and adopted as part of Ordinance 19146. The regulations adopted through the 2020 update are still in place today, and are summarized broadly below.

A *fossil fuel facility* is defined as:

*A commercial facility used primarily to receive, store, refine, process, transfer, wholesale trade or transport fossil fuels, such as, but not limited to, bulk terminals, bulk storage facilities, bulk refining and bulk handling facilities. Fossil fuel facilities do not include: individual storage facilities of up to thirty thousand gallons and total cumulative facilities per site of sixty thousand gallons for the purposes of retail or direct-to-consumer sales, facilities or activities for local consumption; noncommercial facilities, such as storage for educational, scientific or governmental use; or uses preempted by federal rule or law.[[5]](#footnote-5)*

*Fossil fuels* are, in turn, defined as:

*Petroleum and petroleum products, coal and natural gas, such as methane, propane and butane, derived from prehistoric organic matter and used to generate energy.  Fossil fuels do not include:*

*A.  Petrochemicals that are used primarily for non-fuel products, such as asphalt, plastics, lubricants, fertilizer, roofing and paints;*

*B.  Fuel additives, such as denatured ethanol and similar fuel additives, or renewable fuels, such as biodiesel or renewable diesel with less than five percent fossil fuel content; or*

*C.  Methane generated from the waste management process, such as wastewater treatment, anaerobic digesters, landfill waste management, livestock manure and composting processes.[[6]](#footnote-6)*

It is important to note that, under the definition above, a facility that burns fossil fuels for the purpose of generating electricity is *not* considered a fossil fuel facility. Language was added to clarify that such facilities are included under the definition of *non-hydroelectric generation facility,* which includes all electricity generation facilities except those powered by hydroelectricity and renewable energy.[[7]](#footnote-7)

There are several specific uses that may fall under the definition of fossil fuel facility or non-hydroelectric generation facility, but that the County is preempted from regulating by state or federal law. Executive staff have identified the following uses as those involving fossil fuels and likely falling under the County's authority: [[8]](#footnote-8)

* Fossil Fuel Facilities:
  + Liquified Natural Gas (LNG) Plant
  + Oil Terminal
* Non-hydroelectric Generation Facilities:
  + Thermal (gas) Electric Power Plant

Fossil fuel facilities were added as an allowed use in the Industrial zone, subject to a special use permit.[[9]](#footnote-9) A special use permit is required for all new, modified, or expanded facilities, with modification or expansion defined broadly to include changes in fuel types, the type of process used, location changes on-site, and increases in capacity, water, or power demands, among other things. Requirements include:

* A community meeting prior to permit application;
* The following documentation:
  + An inventory of similar existing facilities in King County and neighboring counties, including their locations and capacities;
  + A forecast of the future needs for the facility;
  + An analysis of the potential social and economic impacts and benefits to jurisdictions and local communities receiving or surrounding the facility;
  + An analysis of alternatives to the facility, including location, conservation, demand management and other strategies;
  + An analysis of economic and environmental impacts, including mitigation, of any similar existing facilities and of any new site(s) under consideration as an alternative to expansion of an existing facility;
  + An extensive public involvement strategy which strives to effectively engage a wide range of racial, ethnic, cultural, and socio-economic groups, including communities that are the most impacted;
  + Considered evaluation of any applicable prior review conducted by a public agency, local government or stakeholder group; and
  + A greenhouse gas analysis; and
* The following locational requirements:
  + Not located within one thousand feet from any schools, medical care facilities, or places of assembly that have occupancies of greater than one thousand persons;
  + Not located within two hundred fifty feet from a regulated wetland or aquatic area, except when a larger buffer is required under K.C.C. chapter 21A.24, the buffer in K.C.C. chapter 21A.24 shall apply;
  + An interior setback of at least two hundred feet;
  + Fossil fuels stored completely within enclosed structures, tanks or similar facilities; and
  + Direct access to and from an arterial roadway.

Additional requirements were also added for non-hydroelectric generation facilities, except for those limited to gas extraction as an accessory use to a waste management process, such as wastewater treatment, landfill waste management, livestock manure and composting processes.[[10]](#footnote-10) For non-hydroelectric generation facilities not associated with waste management, a community meeting and all of the documentation requirements described above are required, in addition to the requirement to submit a report demonstrating that the facility would serve a significant portion of the county, metropolitan region or is part of a statewide or national system.

Lastly, fossil fuel facilities, but not non-hydroelectric generation facilities, were added as a use subject to five-year periodic reviews under K.C.C. 21A.22.050. During these five-year reviews, the Permitting Division reviews the operation of the facility to ensure it is operating consistent with permit conditions, and establish corrective actions if not.

**Fossil Fuel Risk Bond Evaluation/Financial Responsibility Report.** As noted above, the 2019 study evaluated, but recommended against, imposing financial guarantees.

*2020 Comprehensive Plan Action Item.* As part of the 2020 update, the Council added a Comprehensive Plan Action Item, Action 20, which required:

* An economic risk assessment of fossil fuel facilities and related uses, and climate change, including:
  + Risks associated with catastrophic explosions, train derailments, spills, air and water pollution, brownfields,[[11]](#footnote-11) and abandoned infrastructure;
  + Economic risks associated with changes in frequency and severity of climate-related disasters, including expected annualized costs to County

finances, the County’s economy, and County households over the next fifty years associated with several categories of risks.

* An evaluation of the adequacy of existing financial assurance mechanisms in reducing the County’s economic and financial risks associated with fossil fuel facilities and related uses, and climate change, including financial assurance mechanisms such as surety and performance bonds, letters of credit, third party trust funds, insurance, corporate guarantees, and others. The evaluation was required to compare risk exposure for the County, with the maximum likely coverage of that risk by these mechanisms, and to include recommendations for additional financial assurances or other measures that need to be adopted to minimize risks.[[12]](#footnote-12)

*Fossil Fuel Risk Bonds Report.* Concurrent with transmission of PO 2022-0258, the Executive transmitted a Fossil Fuel Risk Bonds Report, which is Attachment 5 to this staff report. As noted above, the Executive identified three types of fossil fuel businesses that 1) fall within the definition of fossil fuel facility or non-hydroelectric generation facility and 2) fall under King County's permitting jurisdiction. These are a liquified natural gas (LNG) plant, oil terminal, and thermal (gas) electric power plant. The report therefore focuses on those three business types, and specifically with the impact of explosions, air and water pollution, brownfields, and oil spills, noting that impacts associated with pipelines, train derailments, and fuel tanker spills fall outside the County's permitting jurisdiction or incident control. None of the three business types identified above currently exist in unincorporated King County.

The report found that there is sufficient evidence of past high-cost explosion incidents to propose requiring proof of adequate financial coverage for explosions for all three business types. The report found that the cost impacts of an explosion resulting from a worst-case release could range from $34.6 million to $2.18 billion, or $690,000 to $43.6 million annually when averaged over 50 years.

The report also found that, for oil terminals, there was enough evidence to recommend financial coverage for brownfield impacts associated with site contamination. Discharge of petroleum products into the soil at such sites is common, and frequently requires remediation after a site is abandoned. For LNG plants, the report found that, while natural gas, being gaseous at normal temperatures, is not a soil contaminant, other chemicals used at LNG plants have the potential for soil contamination and that financial coverage for brownfields at such sites is warranted. On the other hand, the report does not recommend financial coverage for brownfields at thermal (gas) electric power plants, as it did not find evidence of notable brownfield impacts associated with those businesses. The report states that, for the LNG plants and oil terminals, the average estimate of the potential cost based on industrial cleanup activities is roughly $3 million for one site cleanup; over 50 years, it would average $60,000 annually in costs.

The report did not recommend financial coverage against air and water pollution or oil spills, outside of the impacts described in the paragraphs above. The stated reasoning is as follows:

* *"Technology to mitigate the impacts may be available and could potentially be required through the State Environmental Policy Act;*
* *There may be multiple contributors to some types of pollutants beyond a fossil fuel facility, and accurately defining how to assess impacts and require cost-coverage would be logistically and potentially legally challenging at this time; or*
* *There may be other regulatory mechanisms in place already requiring adequate fiscal coverage."*

The report notes that, when mitigating for specific incidents or environmental releases, the costs of these impacts are unlikely to exceed the cost-coverage required for a facility explosion given the higher costs associated with explosions.

The report does not recommend that a specific financial assurance mechanism be used, but instead recommends leaving the type of financial assurance mechanism open, as long as it is in a sufficient amount. However, the report did identify past issues with self-bonding in the fossil fuel industry when facilities undergo bankruptcy filings.[[13]](#footnote-13) Therefore, the report recommends that self-bonding not be accepted as a financial assurance mechanism to cover identified financial risks associated with potential explosion or site contamination.

**ANALYSIS**

PO 2022-0258 would add financial responsibility requirements for fossil fuel facilities and non-hydroelectric generation facilities, consistent with the recommendations of the Executive's Fossil Fuel Risk Bonds Report.

**Proposed Financial Responsibility Requirements.** The proposed financial responsibility requirements are summarized broadly in Table 1.

**Table 1.**

**Summary of Proposed Requirements**

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|  | **Fossil Fuel Facilities** | **Non-Hydroelectric Generation Facilities** |
| Proof of financial responsibility required in an amount necessary to compensate for the maximum damages from an explosion resulting from a worst-case release explosion | Yes | Yes[[14]](#footnote-14) |
| Proof of financial responsibility required in an amount necessary to compensate for facility decommissioning (e.g., brownfield remediation) | Yes | No |
| Methods of financial responsibility acceptable[[15]](#footnote-15) | Any, except self-bonding | Any, except self-bonding |

The level of financial responsibility necessary would be determined by the Executive based on studies provided by the applicant at the time of permit application. The PO lays out the information that would be required in these studies.

*Explosion Study Requirements.* For the explosion scenario, the study would be required to:

* Incorporate the volume of oils, gases, refrigerants and other flammable or explosive chemicals stored, used or generated within the facility;
* Consider such matters as: the frequency of facility operations; facility layout and vegetation that could cause flammable vapor accumulation; the damages that could result from the explosion to public and private structures onsite and offsite, public infrastructure and environmental resources and functions; and the potential loss of life and injury to persons onsite and to members of the public;
* Include modeling and disclosure of a nil or very low wind condition vapor cloud explosion scenario;
* Be prepared by a person accredited in vapor cloud explosion analysis, or an equally qualified individual as authorized by the director, at the applicant's expense;[[16]](#footnote-16) and
* Undergo third-party validation by a qualified entity to be hired upon mutual agreement of the applicant and the department, at the applicant's expense.

*Decommissioning Study Requirements.* For decommissioning, the study would be required to include, but not be limited to:

* Listing of the hazardous substances, as defined in RCW 70A.305.020, that will be stored, handled or generated within the facility; the range of potential release volumes requiring cleanup in the event of failures of technological or safety catchment features; and whether such releases have the potential to contaminate groundwater or surface waters on or adjacent to the site;
* The range of cleanup activities that would be required to address such hazardous substances;
* Detailed estimates of the cost to implement the plan, including conducting cleanup and facility closure, based on the cost of hiring a third party to conduct all activities. All cost estimates must be in current dollars and may not include a net present value adjustment or offsets for salvage value of wastes or other property; and
* Methods for estimating closure costs.

*Periodic Reviews.* The PO states that financial responsibility would need to be in place for the duration of facility operations, and would be verified every five years during the facility's periodic review required by K.C.C. Chapter 21A.22. However, non-hydroelectric generation facilities are not subject to period reviews per K.C.C. Chapter 21A.22. Executive staff have asked that the PO be amended to require five-year reviews of the adequacy of these facilities' financial responsibility, but not subject them to the full five-year review required for fossil fuel facilities and mineral extraction operations. Whether to require a full review, partial review, or no review on a five-year basis for non-hydroelectric generation facilities is a policy choice for Councilmembers.

*Applicability to Facilities Owned or Operated by State or Local Governments.* State law contains the following prohibition: "A county legislative authority may not require any state agency or unit of local government to secure the performance of a permit requirement with a surety bond or other financial security device, including cash or assigned account, as a condition of issuing a permit to that unit of local government for a building construction project."[[17]](#footnote-17) This prohibits the County from imposing the financial responsibility requirements of this PO fossil fuel facilities or non-hydroelectric generation facilities owned or operated by state or local governments. Current County code mirrors this prohibition, but also extends the prohibition to gas and electrical companies, something that is not required by state law.

The PO would remove the reference to gas and electrical companies, allowing them to be subject to the financial responsibility requirements. The PO would also add new language to the code relating to financial guarantees, which could be read to imply that the County *does* have the authority to impose financial guarantees on state and local governments. After discussion with Council staff on this issue, Executive staff has recommended striking this proposed additional language.

*Applicability to Non-fossil-fuel-related Businesses.* As noted above, the Fossil Fuel Risk Bonds Report focused one on specific type of non-hydroelectric generation facility, a thermal (gas) electric plant, that was determined to 1) meet the code definition, 2) fall under the County's regulatory authority, and 3) involve fossil fuels. However, there are other business types that potentially meet the first two criteria but do not involve fossil fuels. These include electrochemical (battery) energy production facilities that are not part of a renewable energy proposal, biomass, and waste-to-energy. These facilities would be subject to the same financial responsibility requirements as thermal (gas) electric plants. Executive staff state that, while these facilities were not part of their initial research, they have found evidence of fire and explosion risk at these types of facilities.

**State Environmental Policy Act.** The PO requires review under the State Environmental Policy Act. The Executive completed an environmental checklist[[18]](#footnote-18) and issued a Determination of Nonsignificance[[19]](#footnote-19) on March 30, 2022. The SEPA review for the Executive's proposal is therefore complete.

**Outreach and Engagement.** Executive staff provided a summary of outreach and engagement done while drafting this ordinance. The summary is Attachment 8 to this staff report.

**Next Steps.** Council staff has identified technical and clarifying changes to match Executive intent that could be addressed by amendment. If the PO is moved out of the Local Services and Land Use Committee, a 30-day Hearing Notice will be required prior to a hearing in full Council. Any substantive changes through amendment may require additional SEPA review.

**INVITED**

* Jim Chan, Division Director, Permitting Division, Department of Local Services
* Nicole Sanders, Principal Planner - Green Building, Permitting Division, Department of Local Services

**ATTACHMENTS**

1. Proposed Ordinance 2022-0258
2. Transmittal Letter
3. Fiscal Note
4. Plain Language Summary
5. 2022-RPT0086 Fossil Fuel Risk Bonds Report
6. SEPA Environmental Checklist
7. SEPA Determination of Nonsignificance
8. Executive's Public Engagement Summary

1. Various documents related to this PO alternately use the terms "financial assurance," "financial guarantee," "financial responsibility," and "risk bonds," which may have different meanings in fact, but are understood to be referring to the same thing in the context of this proposed ordinance. This staff report generally uses the term "financial responsibility, as the PO does, except when referring to language in a document that uses a different term. [↑](#footnote-ref-1)
2. 2019-RPT0109 [↑](#footnote-ref-2)
3. Ordinances 18946 and 19042 [↑](#footnote-ref-3)
4. Page 10 [↑](#footnote-ref-4)
5. K.C.C. 21A.06.532 [↑](#footnote-ref-5)
6. K.C.C. 21A.06.532C [↑](#footnote-ref-6)
7. K.C.C. 21A.06.805 [↑](#footnote-ref-7)
8. 2022-RPT0086 [↑](#footnote-ref-8)
9. General requirements for special use permits can be found in K.C.C. 21A.44.050. [↑](#footnote-ref-9)
10. Due to an error, the regulations also do not currently apply to non-hydroelectric generation facilities in the Mineral zone. [↑](#footnote-ref-10)
11. According to the US EPA, a brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. [↑](#footnote-ref-11)
12. This is a summary, full Workplan Item text can be found on page 3 of Attachment 5 to this staff report. [↑](#footnote-ref-12)
13. Self-bond is defined in 30 CFR 800.1 as an indemnity agreement in a sum certain executed by the applicant or by the applicant and any corporate guarantor and made payable to the regulatory authority, with or without separate surety. [↑](#footnote-ref-13)
14. The PO contains a caveat for non-hydroelectric generation facilities that financial responsibility is only required if determined to be "available and affordable." Executive staff indicate that this language was included in error and ask that it be removed. [↑](#footnote-ref-14)
15. Examples of acceptable financial responsibility include insurance and surety bonds. [↑](#footnote-ref-15)
16. There is a slight difference between the language in the sections for fossil fuel facilities and non-hydroelectric generation facilities. Executive staff have stated the preference that both sections reflect this verbiage. [↑](#footnote-ref-16)
17. RCW 36.32.590 [↑](#footnote-ref-17)
18. Attachment 6 to this staff report. [↑](#footnote-ref-18)
19. Attachment 7 to this staff report. [↑](#footnote-ref-19)