

## Gilliland, Jenifer

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**From:** Jonlin, Duane  
**Sent:** Wednesday, March 17, 2021 8:47 AM  
**To:** Gilliland, Jenifer  
**Subject:** Fw: Proposed HPWH amendment to Seattle Energy Code

letter



Duane Jonlin, FAIA  
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**From:** Robyn Rothman <[rrothman@hcwh.org](mailto:rrothman@hcwh.org)>  
**Sent:** Thursday, March 11, 2021 3:57 PM  
**To:** Jonlin, Duane <[Duane.Jonlin@seattle.gov](mailto:Duane.Jonlin@seattle.gov)>  
**Subject:** Proposed HPWH amendment to Seattle Energy Code

**CAUTION: External Email**

Hi Duane,

I am reaching out about the proposed update to the Seattle Energy Code regarding heat pump water systems. I lead the [Washington Health Care Climate Alliance](#), a coalition of 7 health systems, representing 40 hospitals and over 950 health care clinics in the state, who are committed to protecting their patients and communities from climate change. The majority of the health systems have facilities in Seattle.

We have concerns about this proposed update, which we'd be happy to discuss with you more. Our concerns primarily relate to hospitals, but sometimes medical office buildings are on the same district loop or centralized heating system as hospitals. Hospitals and outpatient clinics are very unique commercial buildings, with high energy and thermal requirements.

Water safety:

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- In hospitals, water
- quality safety (ie: legionella) is a big concern. HPWH may require larger water storage systems to deal with periods of high demand. As such, Additional water storage at domestic hot water temperatures (110 – 120 degrees – a point of legionella growth) is
- discouraged where water borne infection is at greater risk.
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## Equipment and facility issues:

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- In order to replace
- a NG water heater with a HPWH, depending on the size, a whole new service may be needed in order to handle the additional electric load.
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- In our smaller healthcare
- facilities, hot water heaters are often located in closets where the volume of air may be insufficient to support a HPWH.
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- Does the energy code
- apply to buildings facing replacement of existing gas fired water heaters, or steam to hot water converters? If so, this could be problematic for a couple of reasons:
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  - if there is insufficient
  - existing electrical capacity in the building for conversion to electric heat pump water heating and
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  - if there are challenges
  - with rejection of the cooling from the heat pump process (often water heaters are located in the basement where access to air exchange for cooled air is limited).
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- Would this provision
- limit the flexibility of modification of existing central hot water / steam converter systems serving campus application, such as hospitals? For example, would replacement fossil fuel fired steam hot water converters need to be replaced with heat pump water
- heaters?
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## Emergency power:

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- Hospitals are required
- to have 96 hour on-site fuel sources for emergency power in case of power outages. Additional onsite backup emergency electrical generation capacity will be required to cover the use of the HCWH in times of power outages. In addition to the cost considerations,
- there are emissions considerations as the standard of care and required emergency power source for hospitals are diesel generators.
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## Financial concerns: (Note: 95% of hospitals in WA are nonprofit or publicly owned)

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- These requirements

- not only require considerable financial consideration on budgets that are already strained to maintain patient care, but there are also physical limitations as to where additional service entrances and generators could be placed to cover this type of conversion.
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- Hot water service
- for washing and cleaning is one of the smaller energy consuming loads. For new buildings, HPWH makes sense. For existing buildings, the extra costs to convert to HPWH might be better spent on other EEMs.
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Please let me know if we can set up a meeting to discuss these issues in more depth.

Thanks,  
Robyn

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