Staff Report

Devens Enterprise Commission

Date: August 22, 2024

To: **Devens Enterprise Commission**

From: Neil Angus, DEC Director

RE: **33 Jackson Road – Electric Hydrogen Vegetated Roof Alternative Proposal**

Owner: King Devens, LLC/King Street Properties Acquisitions, LLC.
Applicant: Electric Hydrogen
Location: **33** Jackson Road, Devens, MA
Zoning: Innovation & Technology Business District, Watershed Protection Overlay District and Viewshed Protection Overlay District.

Electric Hydrogen (EH2) operations have triggered the need for an air quality permit from MassDEP. As a result, they are required to comply with the DEC Industrial Performance Requirements Section 974 CMR 4.11.2(c) – Greenhouse Gas(GHG) Mitigation, which requires projects that trigger the need for a MassDEP Air Quality Permit to have at least 30% of the facility's roof footprint accommodated with a vegetated roof system built in accordance with the DEC's Policy for Construction of Vegetated Roofs.

EH2 is a tenant in the building which is owned by King Street Properties and has a number of rooftop mechanicals and roof penetrations that limit the amount of roof area available for a vegetated roof. DEC Staff explored other alternative location options with both the Applicant and owner (Amenity building, green roof and solar roof parking canopies but achieving the 30% area requirement proved challenging). The Air Permit is required for EH2's specific operations, not the building, and the owner is does not want to install a green roof.

EH2 is proposing an alternative compliance pathway that would involve a renewable electricity procurement alternative in lieu of the vegetated roof requirement. This procurement would uphold the spirit of the DEC's bylaws in support of greenhouse gas emissions mitigation. For as long as EH2 requires a MassDEP Air Quality Permit, EH2 would annually purchase Renewable Energy Certificates (REC's) in an amount that meets or exceeds the performance of a vegetated roof with respect to reduced energy costs and avoided greenhouse gas emissions. These REC's would then be retired each year in the DEC's name so the renewable energy generated is not re-sold (or double-counted) on the electricity market.

EH2 has conducted an analysis of the GHG emissions that a 30% vegetated roof can reduce electric and natural gas usage usage and offset up to 3.2 metric tons of CO2-eq/yr emissions from reduced heating/cooling demand. This does not factor in the stormwater absorption/filtering and natural air filtering that the vegetation, which is estimated to reduce another 2.4 metric tons of CO2/yr emissions, for a total of 5.6 metric tons of CO2-eq/yr. This equates to roughly 23MWh of energy per year. EH2 is proposing to procure ≥23 MWh per year of Class I Massachusetts renewable energy certificates, which would be the equivalent of the energy savings that a 30% vegetated roof would provide. As you can see from their presentation slides, there are a number of assumptions in these equivalency calculations, and some of the data is based on a short research timeline, so staff has suggested EH2 factor in a 10% contingency and have EH2 procure 25 MWh per year of Class I Massachusetts renewable energy certificates and retire them each year in the DEC's name. This would equate to 6.125 metric tons of avoided CO2 emissions each year this plant is operating (based on EH2's calculations).

The purchasing of REC's from a Massachusetts source helps ensure that the environmental benefits stay local (as opposed to buying wind energy from California or elsewhere far away). The retiring of the REC's keeps the credits from being re-sold and would be over and above EH2's goal of utilizing 100% renewable energy to power their factory here in Devens. We have reviewed this proposal and the calculations with our Greenhouse Gas Emissions consultant (KLA Associates) and they have agreed that this alternative compliance pathway is a suitable alternative that would achieve similar environmental benefits to that of a 30% vegetated roof. The 10% continency, coupled with

EH's goal of 100% renewable energy for their facility, and the fact that EH2 is producing electrolizers that will further reduce global carbon emissions, makes this a good compromise to support an emerging green technology.

MassDevelopment has a NEPOOL account (New England Power Pool - wholesale Energy Market) through ISO New England and the REC's can be managed through their account.

If the Commission is in agreement with the proposed alternative compliance pathway, the DEC should make a finding that the proposed Renewable Electricity Power Purchase Agreement for EH2 is a suitable compliance pathway in lieu of the 974 CMR 4.11.2(c) Greenhouse Gas Mitigation 30% vegetated roof requirement and make a motion to require Electric Hydrogen to procure 25 MWh per year of Class I Massachusetts renewable energy certificates (REC's) for retirement by the Devens Enterprise Commission for as long as a MassDEP Air Quality Permit is required for their facility. Such REC's shall be purchased and retired through MassDevelopment's NEPOOL account and are in addition to any procurements of REC's for EH2's facility electrical and gas operational offsets. Annual documentation shall be required to be submitted to the DEC to confirm each transaction to meet this requirement.