



Solar study's key findings:

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Findings from Oregon Department of Transportation on the feasibility on the solar highway

Electromagnetic fields and public health

A review commissioned by ODOT found electromagnetic field levels would likely fall below international standards for public exposure and be "indistinguishable from background levels produced by other natural sources at the perimeter of the site's security fence."

Wildfire risk

Because developed land typically poses fewer risks of wildfire than undeveloped properties, the solar highway site may be less prone to wildfire if ODOT moves ahead with the project, according to a letter from Tualatin Valley Fire and Rescue. TVF&R is also the agency designated to fight any fire that might occur on the state's solar highway demonstration project at the I-205 and I-5 interchange near Tualatin.

Crime and vandalism

Although a nearby rest area was closed years ago after becoming a magnet for crime, officials believe the solar highway site will be safe; they won't reopen public access from the freeway and plan to use a wide array of security features similar to those at the demonstration solar project near Tualatin.

Those features include a 6-foot-tall fence topped with razor wire, motion detectors and electrical-circuit interruption sensors, security lighting, video cameras, a 24-hour security response service and "no trespassing" signage. In addition, agency representatives last week said identification chips implanted in the panels help avert potential thieves.

Panel glare

Researchers found that the panels wouldn't cause glare or reflection.

Biological resources

According to the agency's biologist, the project is unlikely to have "significant impacts" on biological resources such as wildlife, native plants or aquatic species.

The project area is not within, adjacent to or near key wildlife corridors. Birds and small mammals such as sparrows, red tail hawks and raccoons might frequent the site, but the area's proximity to the freeway and urban development makes it an unlikely choice for many animals, the study found.

In terms of plants, the site contains habitat of dry, non-native grasslands with dispersed stands of trees, although none is large enough to constitute a forest or woodland. Tree species include Douglas fir, big leaf maple, black cottonwood, Oregon white oak and madrone.

Several "special status" species live in undisturbed spots in the vicinity, but the overall "disturbed nature" of the location has already caused native plants to be replaced with nonnative species such as Himalayan blackberry, Scotch broom and Canadian thistle. No special status species would be harmed because of the project, consultants found.

However, they noted there could be some ecological impacts, such as "small-scale temporary impacts on resident wildlife during construction" and "some long-term loss of nesting and foraging habitat." In addition, construction could spread non-native invasive species and build up sedimentation in streams that could flow over to the Willamette River, posing implications for fish.

conducting work only outside of migratory bird nesting and breeding times and requiring weed suppression and native plant restoration on site.

Water resources and wetlands

A couple of intermittent streams run along the eastern and western edges of the project area and connect to other waterways, but consultants concluded they are “unlikely to support aquatic reptiles, amphibians or species of concern” because of poor water quality and steep slopes.

Of a handful of wetlands on site, the project would require filling one; however, the wetland – about 1.5 acre large and on the hill close to the freeway – is considered isolated, meaning it doesn’t connect to larger water bodies.

Stormwater management

The project calls for using low-impact development techniques like vegetated strips to filter rainwater and excess stormwater funneled into shallow bioswales along each row of solar panels. Stormwater beyond what is absorbed in the swales would flow down the terraces in ditches and into an existing culvert.

Land use

Because it’s within city limits, project managers would have to ensure they comply with West Linn’s zoning limits and tree removal rules. And while owned by the state and considered part of ODOT’s public right-of-way, the property contains some land that appears on city maps with residential zoning. The state agency will have to apply for a zoning map amendment or obtain some sort of conditional use permit for the project, according to city planning staff.

Socioeconomic impact

The solar arrays will have no demonstrable effect on property values of nearby homes, according to the report. It also notes the project could boost local economic activity because of new opportunities for construction while benefiting Oregon-based companies that would supply materials and labor.

Geotechnical issues

Freeway construction in 1969 triggered a massive landslide at the site, but today the slope does not pose a hazard for nearby properties. A geotechnical expert found no likelihood of a slide similar to that one; however, smaller, shallower ground movement could occur in the event of an earthquake.

Air quality

Air quality could be affected in the short term because of construction activities, which involve heavy machinery, construction vehicles and earth excavation. Consultants recommended limiting how long vehicles idle and suppressing dust during building activities. They also noted in the long run, the solar highway installation could improve regional air quality by reducing reliance on energy derived from fossil fuels.