

Statement **in opposition** to approval of the Jordan Cove LNG Terminal proposal

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References are listed in:

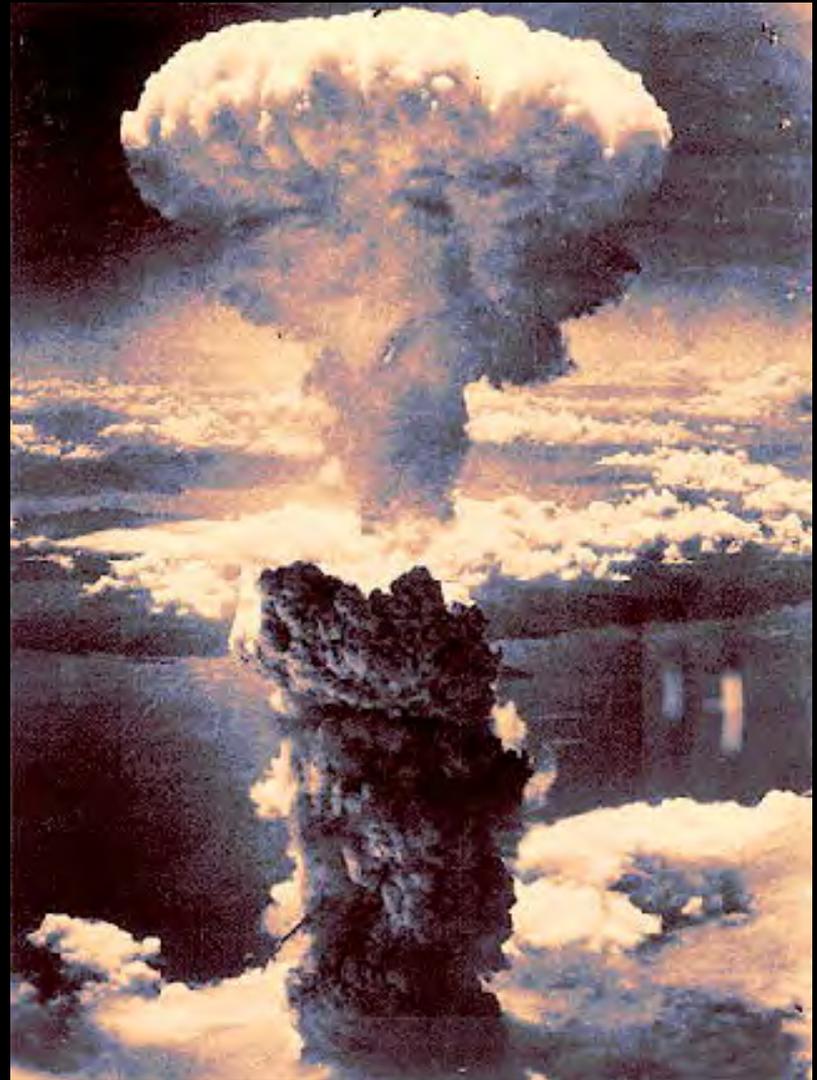
LNG: Neither Safe Nor Wise

www.tombender.org/societworthlivingforarticles/lng.pdf

Oregon Coast Impacts of Global Warming

www.tombender.org/societworthlivingforarticles/GLOBAL%20WARMING.htm

The greatest single disasters affecting a city in history were the atomic bombing of Hiroshima and Nagasaki.



I happened to be in Hiroshima in 1965
at the 20th anniversary of that bombing.



I will never forget
my experience

- even at that time
distance –

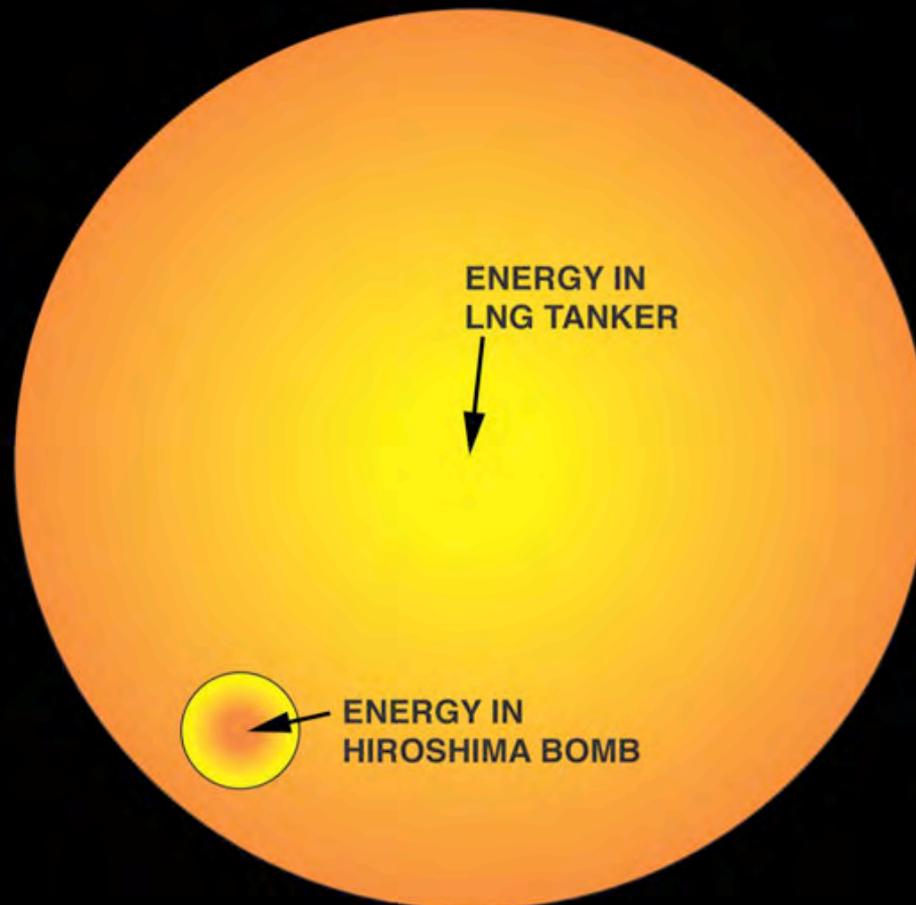
seeing the impacts
of the explosion
on the city.







In comparison, the energy contained in 70,000,000 gallons of LNG **in a single tanker** represents the energy equivalent of **120 to 160** Hiroshima bombs.



MANY people would thus consider LNG tankers potential terrorist targets, and a hazard to surrounding communities. However, NO studies have assessed the potentials of airborne terrorist attack on LNG ships (or storage tanks).



I moved to Oregon in 1974
to work in Gov. Tom McCall's office
on energy research.

One element we examined was
security of our energy system.

I learned quickly how to easily explode a
nuclear reactor without coming near it,
blow up oil pipelines, etc.

I later predicted 9/11,
fifteen years before it occurred,
and the amazing ease with which a
complex society can be destroyed.

ISIS and others have shown it is quite
unwise having easily accessible and
destroyable energy facilities.

While tanker hulls are designed for some protection from impact, tanker tops are NOT.



A ten minute search on the internet can provide anyone with information on fuel-air bombs, where to obtain or how to make them.



A fuel-air bomb is the closest non-nuclear equivalent to an atomic bomb. It disperses its “fuel” contents into the air, combining with its oxygen, then detonating to create a massive shock wave. This can breach an LNG tanker’s LNG tanks, dispersing LNG into the air and detonating it as a “super-fuel-air bomb” similar to how atomic bombs are used to set off a hydrogen bomb.

For details, see “LNG: Neither Safe Nor Wise”, Tom Bender, HIPFISH, January 2005.

Explosion of an LNG tanker could incinerate surrounding communities (here Astoria).



So, explosion of an LNG tanker could incinerate Coos Bay and surrounding communities.

This FEIS image is based on water-top burn of liquid LNG.

The shock-wave explosion possible with a fuel-air bomb terrorist incident could be far more devastating.

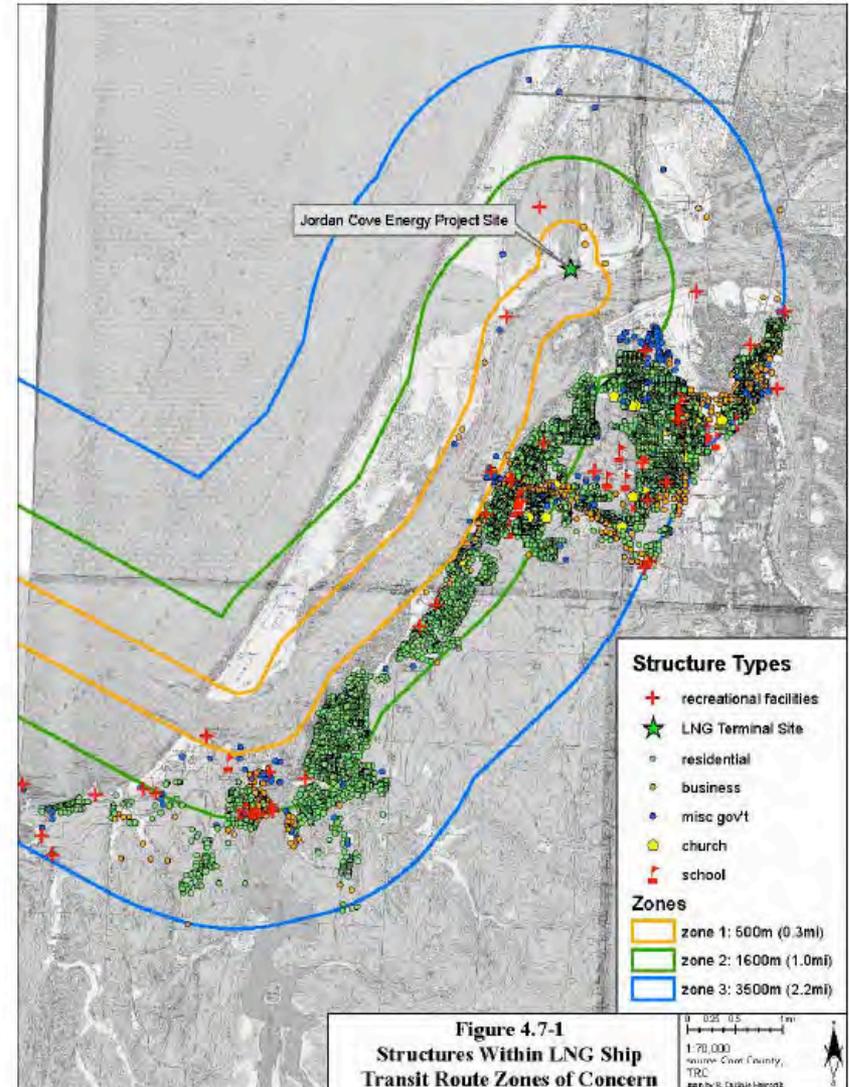
Jordan Cove LNG Tanker Hazard Zones (FEIS Page 4.7-3)

Zone 1 (yellow) - No one is expected to survive in this zone. Structures will self ignite just from the heat.

Zone 2 (green) - People will be at risk of receiving 2nd degree burns in 30 seconds on exposed skin in this zone.

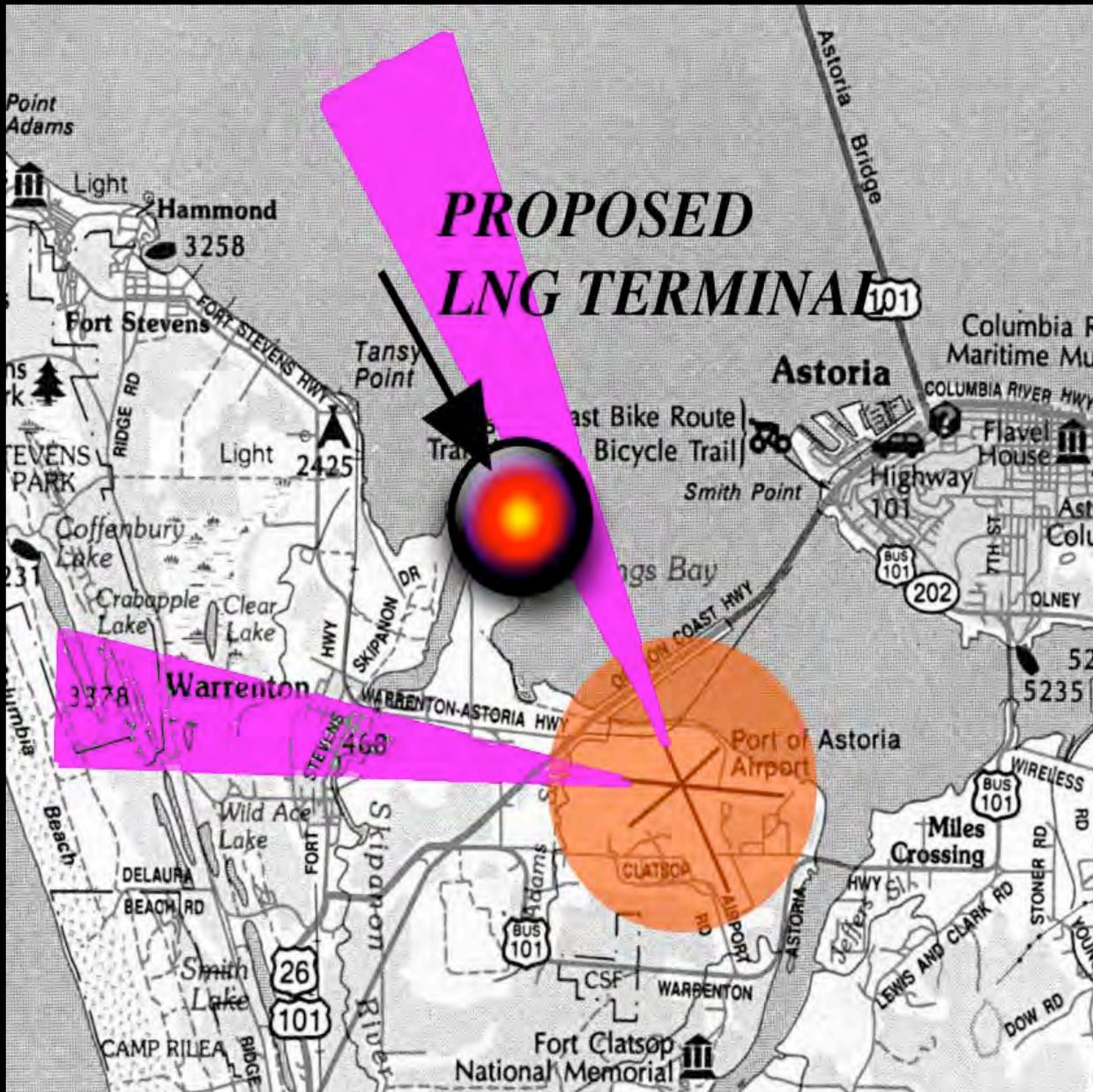
Zone 3 (blue) - People are still at risk of burns if they don't seek shelter but exposure time is longer than in Zone 2.

Map does not include the hazard zones for the South Dunes Power Plant and the Pacific Connector Gas Pipeline.



You could almost think that ISIS is in charge of repeatedly planning LNG terminals on the approach path to public airport terminals!





And **WHY**, do none of our state or federal agencies seem to have any concern about public safety?

Considering the magnitude of these risks,
I am STUNNED

that not a single state or federal agency
involved in review
of possible LNG terminals

has EVER knowledged or evaluated such
risks.

These project proposals violate Oregon Land Use

Goal 2: Land Use Planning

- They fail to evaluate alternative courses of action and ultimate policy choices.
- Energy efficiency and renewable resources provide a safer, cheaper, more environmentally friendly, and anti-global-warming source of energy.
- Those alternative courses of action would have more favorable impacts on the community, its employment, and its economy.
- The proposals **did not evaluate** such courses of action and related ultimate policy choices.

The alternative option of focusing on renewable energy and energy efficiency rather than creation and transport of LNG for meeting energy needs is the only safe and affordable option.

Two-thirds of NW electricity comes from renewable sources, and half of the NW energy “supply” over the last twenty years has come from energy efficiency.

It gives greater security, is less expensive, and sustainable – which LNG use, import ,or export are not.

This project proposal violates Oregon Land Use
**Goal 7: Areas Subject to Natural
Hazards**

The terminal site is subject to submergence,
within its project life,
from global warming sea level rise.

The project site is subject to massive R-9.5
subduction earthquake impacts.

Like the defeated Columbia River LNG sites, the Jordan Cove site **will be inundated** by sea level rise from global warming.



- The rate of glacial melt and movement and related sea level rise has become far more rapid than projected, and is likely within the projected use life of the project. For details, see for example the June 2007 issue of National Geographic.
- Oregon Global Warming Map from the Oregon Secretary of State, OSU, Ecotrust, and Resource Innovation.

The 2012 DOGAMI Tsunami Inundation map shows the Jordan Cove LNG site is subject to inundation by tsunami, and subject to horizontal earthquake movement **FIVE TIMES** greater than previously anticipated.



Devastating Oregon Coast impacts of global-warming storm intensity and sea level rise are likely to **ban the use of fossil fuels such as LNG for generating electricity.** **CO₂ release from liquifaction of LNG would increase the potential impacts of such “natural hazards.”**



These proposals violate Oregon Land Use
Goal 9: Economic Development

“A proposal for variance from comprehensive plans and policies must demonstrate that it contributes to a stable and healthy economy in all regions of the state.”

- A hazardous, lengthy, and disruptable source-path for energy cannot provide a stable economy.
- A foreign-trade based energy source cannot provide a stable economy.
- No fossil-fuel based economy is stable or sustainable.
- An energy source – such as LNG – that contributes to global warming, threatens the health and stability of our local and state economy.

The Jordan Cove LNG Terminal Proposal presents unacceptable safety hazards.

- The immense economic cost of shipping delays would pressure shippers operate under unsafe conditions.
- The terminal, and ships in transit would create a MAJOR potential terrorist target.
- The impacts of a terrorist event with an LNG ship or terminal surpass the capabilities of any public safety system.

The Oregon LNG Terminal Proposal thus
violates Oregon Land Use

Goal 11: Public Facilities and Services

- There is no way that public safety services can be provided to deal with the magnitude and extent of accidental or terrorist-caused explosions of LNG tankers in transit or in terminal.
- Even in routine operation, distance to facilities and services, and lack of their capacity would result in safety being compromised for employees, construction workers, emergency response personnel, and the local county population.

The Jordan Cove LNG Terminal Proposal violates Oregon Land Use Goal 12: Transportation

It fails to “minimize adverse social, economic and environmental impacts and costs”, and reduces our “ability to have a safe, convenient and economic transportation system”;

- The transportation of LNG is hazardous, not safe.
- Bringing natural gas into Coos Bay is not safe. Recent explosions at LNG facilities and gas pipelines underscore this risk.

The Jordan Cove LNG Terminal Proposal violates Oregon Land Use

Goal 13: Energy Conservation

“Land and uses developed on the land shall be managed and controlled so as to **maximize the conservation of all forms of energy**, based upon sound economic principles.”

“.... 2. The allocation of land and uses permitted on the land **should seek to minimize the depletion of non-renewable sources of energy.**”

The extraction, liquifacation, shipping, regassification, pipeline pumping, conversion to electricity, and transmission of the energy as electricity consumes 75-80% of LNG' s energy.

Direct use, in the place of origin, is therefore five times as efficient.

No production or use of LNG represents “maximizing the conservation of all forms of energy”, nor “minimizing the depletion of non-renewable sources of energy.”

Development of
Jordan Cove LNG,
or **ANY** new LNG projects
ANYWHERE IN THE WORLD,
would appear to violate even existing
climate change agreements.

ANY energy system consuming 75-80% of the
energy involved before use cannot deal with global
warming.

LNG IS
a non-renewable
source of energy.

ANY use of it
inherently causes its depletion, and
does not

“minimize the depletion of
non-renewable sources of energy.”

The less-expensive and safer alternatives of energy-efficiency and renewable energy are required to be addressed and evaluated.

- **Full information has not been made available to the public.**
- **The proposal fails to present and evaluate alternatives.**
 - **The proposed LNG terminal site is unsafe.**
- **LNG represents a major threat to safety and security.**
 - **LNG threatens the economic health of the county.**
- **LNG threatens the air, water, and natural environment.**
 - **LNG threatens the quality of life in Coos County.**

**I REQUEST DENIAL OF THE PROPOSED
JORDAN COVE LNG PROJECT.**