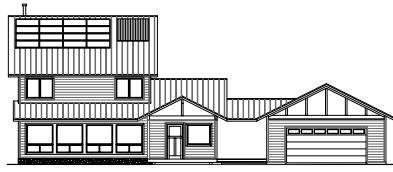
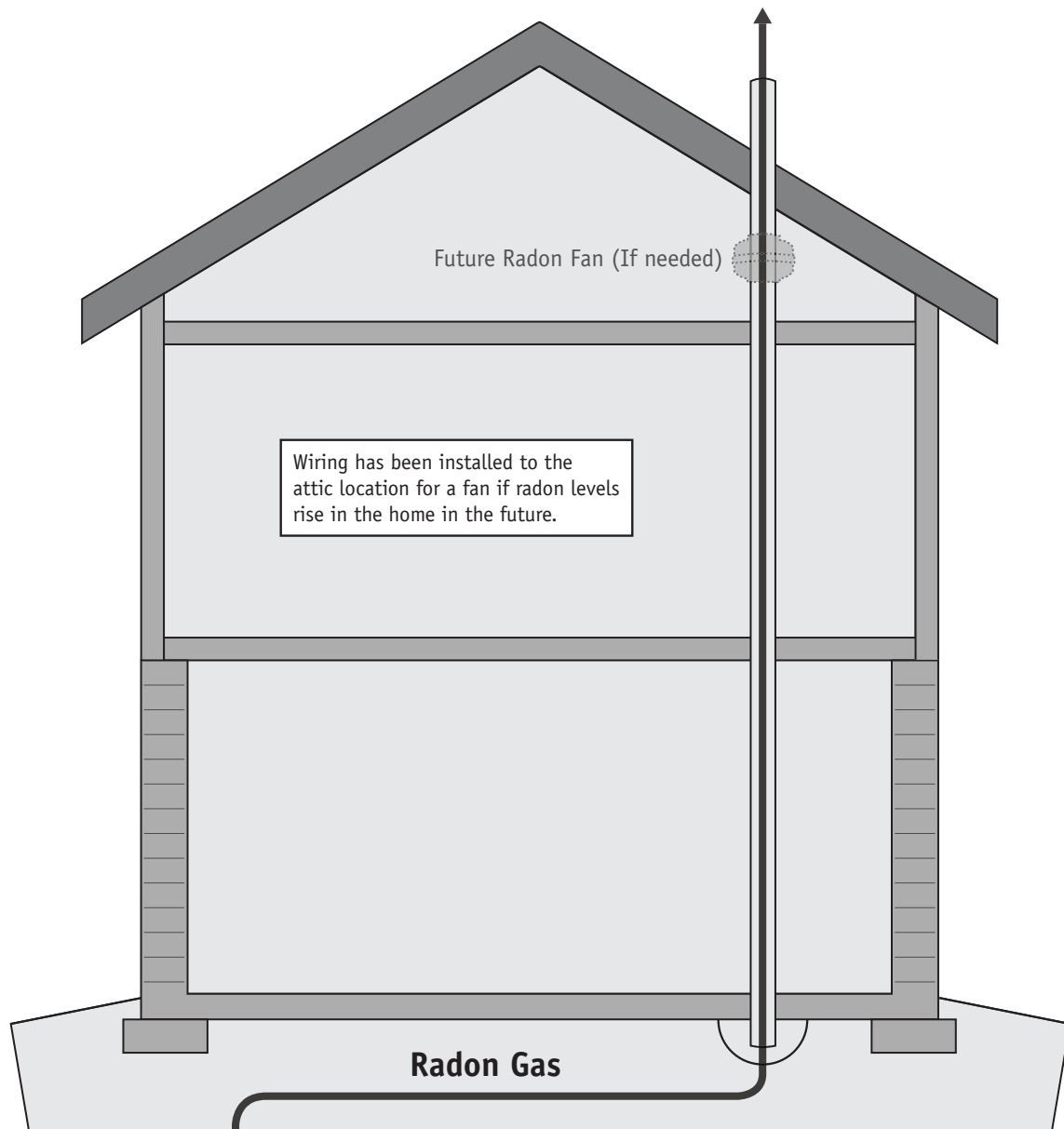


# Eco-Home at Hawk Ridge

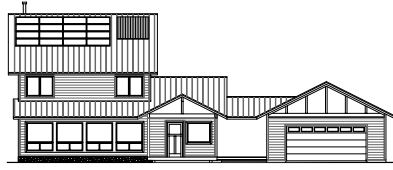


A solar model demonstrating energy efficiency, renewable energy and green building

## Schematic Diagram : Passive (Active Ready) Radon Mitigation System



# Eco-Home at Hawk Ridge



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A solar model demonstrating energy efficiency, renewable energy and green building

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## Radon Mitigation Systems

### About Radon Gas

Radon is a colorless and odorless radioactive gas that occurs naturally. It is the only gas in a radioactive decay chain that originates with uranium and radium bearing rock and soil. As a gas it passes through the soil on its way to the atmosphere. It is present in outside air in relatively low concentrations. The amount escaping from the ground varies with the type of minerals present in or under a given location. It becomes a problem if it enters a building through pores and cracks in the basement or slab where it is in contact with the earth and builds up to higher concentrations. It is believed that radon exposure is the second leading cause of lung cancer after smoking so it is important to do what we can to limit exposure. It is almost impossible to predict whether a given building or site will have dangerously high radon levels so we need to assume that it may be a problem and take measures to control it in our building projects.

### How To Solve The Problem

Radon is drawn from the soil into a building by natural or mechanically induced pressure differences between the soil and the building's interior. We can relieve much of that pressure difference by installing perforated pipes under a building and venting them through a sealed pipe up and out the roof. Often a passive system without a fan is sufficient to control indoor radon levels. Since we cannot predict how much radon is present we need to be prepared for more active measures. Providing a place to install a fan in a radon vent pipe and an electrical circuit to power it is a simple way to be prepared to create an active radon mitigation system. The fan must be in the attic or similar location after the piping passes through the house so that the pipe that passes through the house is always under a negative pressure. That way any leakage that might occur in the system will suck house air in rather than leak radon gas into the building. The pipe termination must be up high and away from windows or other entry pathways so that concentrated radon gas is not drawn back inside the building.