Five decades ago, university leaders made a wise decision and built the Atkinson Heat and Power Plant at UAF. The cogeneration approach was, and still is, the most efficient way to use fuel, because the combustion process creates two products: heat and electricity. Today, the Atkinson plant provides both heat and power for about 3 million square feet of academic, research, office and housing space that averages 34 years old.

Despite excellent maintenance, the plant is nearing the end of its useful life. The main boilers at the plant were installed in 1964 and are designed to last about 50 years. The risk of catastrophic failure is ever-present. With that looming, we studied a wide variety of options and spoke with professionals in the energy and environmental communities. With that input and a variety of technical data to draw on, we settled on a flexible solid fuel solution: a circulating fluidized bed boiler that uses coal and up to 15 percent waste or biomass. Our engineering and environmental consultants are currently working on preliminary design and permitting for the new plant. This requested funding would complete the design of the plant and pave the way for construction and completion by 2017.

Why now?
The Atkinson plant, in its current form, represents an enormous financial and capital risk to the university and the state. The network of pipes that run inside our aging boilers has failed at single points...
before. In the 1990s, a section of the continuously thinning pipe wall finally gave way, filling the plant with steam and nearly freezing campus. That was a relatively small failure. A catastrophic failure could mean millions of dollars in damage to university assets and pose a safety risk to students, staff and faculty. We inspect our boilers for such things, but those inspections cannot cover every square inch of the pipe walls. We know that a test that shows a safe thickness may have missed an imminent blowout just inches away.

If the worst were to happen, the solution is not as simple as tapping into the local electrical grid, because the campus would still be without heat. We could fire up our two backup diesel boilers, but the cost of fuel would swiftly eviscerate the university’s budget. The cost of heating campus with diesel alone would more than quadruple UAF’s annual cost of fuel. Neither the state, the university, nor our students can afford that.

Learn more
www.uaf.edu/heatandpower/ (coming soon)
www.uaf.edu/fs/services/utilities/

We need energy solutions for our future, not temporary patches
Replacing the plant now is the fiscally responsible choice. Not only does it provide a stable long-term solution for the campus’ heat and power needs, it avoids spending millions of dollars on repairs and patches that still don’t guarantee reliable operation. We propose putting those dollars, instead, toward a new plant.

A new plant will mean cleaner air
UAF’s current boiler is using 1890s combustion technology. A new boiler will be more efficient and newer technology. If we were to flip a switch today and have the new plant in place, we would see a marked decrease in regulated emissions, both because of the new technology and because we will need to burn less fuel to get the same amount of heat and power.