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Building Energy Standards, Methods, Energy use penalties, Radiant heating cooling, Shading of glazing, AND

Hello, I am a retired historical architect - National Park Service. Last project I learned about water to water heat pumps for heating and cooling and geothermal bore holes from a young mechanical engineer. When I had my own project, he suggested I contact a Geoff McDonell, mechanical engineer who did workshops on radiant cooling/heating and building envelop design. He also worked with the HEALTHY HEATING educational website founded by a Ray Bean from Calgary, Alberta. I have numerous articles and recommendations from Geoff that would be good for your consideration. Building envelope design must be in collaboration with the architect, the structural engineer and the mechanical/electrical engineers. This is imperative for low energy use buildings! One of his recommendations that also stood out for me: Your agency should set a maximum standard for energy use by building type. When building is commissioned - the annual energy use is calculate and if it does not meet the maximum energy use, the owners will have it corrected or pay an annual energy use surcharge! I am now working on my own new home in La Quinta with thermally broken exterior framing/insulation, all glazing shaded for minimum direct heat gain,. The use of mass floors and ceilings with radiant tubes to stabilize the interior temperatures and the use of quick acting radiant panels on the ceilings for zoning temperature control of interior spaces and exterior covered patios for the hot summers and cooler winters in the desert. I have numerous articles to share with your group. Is there an email address that I can use to send .pdf's directly?

I am counting on the energy tax credits for a geothermal heat pump for hot and cold water and solar credits for powering the pumps. Heating and cooling water will be used for home and the pool. A battery back up system will be installed for nighttime power for the heat pumps. Is there an estimated time for the availability of the tax credits? Please call or email it you have any questions. Ken Duce