March 3, 2010

Paula Ford, Clerk of the Commission
Department of Community Affairs
Building Codes and Standards Office
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-0300

Re: #DCA10-DEC-034
Revised "Petition for Declaratory Statement before the Florida Building Commission" in regards to Florida Building Code Sections M2301.2.3 – Solar System Temperature and Relief Protection

Dear Clerk:

Please find attached, a revised Petition for Declaratory Statement from The LeverEdge, Ben Bentley, Pasco County. We respectfully request a Declaratory Statement from the Florida Building Commission seeking clarification regarding what valve or valves are allowed in the "solar loop" portion of an active direct solar water heating system.

Please contact me directly if you have any questions.

Sincerely,

C.W. (Ben) Bentley
Chairman of the Board

#DCA10-DEC-034

REVISED PETITION FOR DECLARATORY STATEMENT

BEFORE THE FLORIDA BUILDING COMMISSION

Petitioner, The LeverEdge, Ben Bentley, Pasco County, Florida, pursuant to Florida Building Code Section M2301.2.3, hereby requests a declaratory statement on the interpretation from the Florida Building Commission and as grounds therefore states the following:

Petitioner's Name and Address

Name: Ben Bentley, Solar Manufacturer and Wholesale Distributor

Address: 1423 Gunn Hwy.
Odessa, FL 33556

Telephone: (813) 403-5100 Ext. 1136

Facsimile: (813) 403-5081

Email: Bentley@TheLeverEdge.com

Name and Address of Petitioner's Attorney or Qualified Representative, if any

Not Applicable

Respectfully submitted this 10th day of February, 2010

C.W. (Ben) Bentley
Chairman of the Board
Petitioner

Statutory Provision(s), Agency Rule(s), or Agency Order(s)
on Which the Declaratory Statement is Sought

2007 Florida Building Code Section M2301.2.3

SECTION M2301 – SOLAR ENERGY SYSTEMS
M2301.2.3 Pressure and temperature relief. System components containing fluids shall be protected with pressure- and temperature-relief valves. Relief devices shall be installed in sections of the system so that a section cannot be valved off or isolated from a relief device.

Description of How the Staute(s), Agency Rule(s) or Agency Order(s) may Substantially affect the Petitioner in the Petitioner's Particular Set of Circumstances

Petitioner's role – Manufacturer and distributor of approved FSEC solar water heating systems, #1175, model #0-80-40. See attachment showing system isometric which shows the system required P&T and PRV valves for installation.

Specific case – Petitioner provides complete packaged systems to multiple dealers for installation in Pinellas County. Dealer returns the system PRV valve and asks for P&T valve replacement which, when replaced, causes premature system failure resulting in a bad reputation for the entire solar industry. Petitioner has sold complete fabricated solar domestic residential water heating systems to certified solar contractors since 1979, including the proper pressure and temperature relief valves. The system includes a P&T valve, to be installed on the water heater/solar storage tank combination, and a pressure relief valve to be installed on the isolatable side of the "solar loop". Installing a P&T valve on the isolation side of the loop causes premature system failure which decreases petitioner's potential for future sales. It is a fact and the petitioner's contention that solar collector temperature can not be regulated by a valve when the collector is isolated. Since the collector temperature, under a stagnant and isolated condition, far exceeds the temperature setting on any hydronic T&P valve, the thermal gel inside the temperature probe is compromised, allowing even tepid water to discharge from the system, rendering the system inoperable. On the other hand, a pressure relief valve, when the loop is isolated and the pressure producing fixture (the collector) heats up, thermal expansion creates pressure, opens the PRV and spills a cup or so of water onto the roof, closes and repeats as necessary to provide safety from over pressurization but not temperature since the collector temperature will continue to increase until it reaches it's maximum potential for that particular sun condition. Therefore, a pressure relief valve is the valve of choice for manufactures and installing contractors for "solar loop" protection since the PRV provides safety protection and is relatively service free. See attached FSEC "Solar Thermal Manual" support sheets and FSEC system approval sheet, system #1175 for system model #0-80-40 with isometric drawing showing PRV valve installation location.

It is the petitioner's contention that M2301.2.3 says that more than one type of relief device can be installed. Otherwise, instead of saying what it says above, "System components containing fluids shall be protected with pressure- and temperature-relief valves. Relief devices shall be installed in sections of the system so that a section cannot be valved off or isolated from a relief device", it would have said, "System components containing fluids shall be protected with a pressure and temperature relief valve. A P&T valve shall be installed in sections of the system so that a section cannot be valved off or isolated from the P&T valve".

Question:

Is it the intent of 2007 Florida Building Code Section M2301.2.3 to allow installation of a PRV valve in the "solar loop" portion of an active direct solar water heating system?

Respectfully submitted this 10th day of February, 2010

C.W. (Ben) Bentley
Chairman of the Board