Table 1. Efficiency Measures Not Accounted For In the RNC Demo Screening

Ducted Heating and/or Cooling Systems:

??Installation of all heating and cooling ducts and mechanical equipment within the building envelope or ducting tested to be less than 1% leakage to outside.

??Air conditioning equipment sized within 10% or next available size of ACCA Manual J.

??Forced air heating/cooling ductwork for primary space conditioning system complies with ACCA Manual D design criteria.

??If necessary, any ducts that run in outside walls must have at least R-7.5 between ducts and outside.

??Central air conditioning refrigerant charge and air flow documented to be within 10% of manufacturer recommendation.

??Air filter housings must be air-tight to prevent bypass or leakage.

??Air flow for each register measured and complies with Manual J design.

??Returns OR transfer grill in each room with closeable door.

??More than one return per zone.

Hydronic Heating Systems:

??Hydronic distribution system located 100% within house envelope.

??Hydronic distribution system pipes insulated where they run through unconditioned (i.e. no thermostat) spaces (e.g. basements, crawlspaces, etc.).

??Hydronic distribution system designed and sized to match room-by-room loads (submit sizing plan).

??Hydronic boiler with less than 4 gallons water content and/or "low mass".

??Boiler controls set up to "cold start" (i.e. does not maintain boiler water temperature 24/7, but allowed to drift down).

??Modulating aquastat/outdoor temperature sensing controls to adjust circulating boiler water.

Other Energy Saving Strategies:

??Points per added Energy Rating point above 5-star 86 point rating for new and above 83 points for existing homes.

??No air conditioning installed.

??Points for each heating zone beyond one (excludes semi-conditioned basement).

??Paved areas shaded by trees.

??Planted (or building sited with) windbreak on north or northwest.

??Plant new and/or existing shade trees and vegetation for shading west sides of building.

??Additional interior mass by adding second layer of (minimal 1/2") gypsum wall board.

??Trellises to shade west side glass.

??Low-solar admittance glass on west, whole window SHGC <.40.

??Awnings or overhang designed to reduce summer heat gain.

??Locate hot water heater within 20 feet pipe run of all showers/baths and kitchen.

??Whole house cooling/'night flushing' fan with tight insulated winter closure system.

Lighting:

??Utilize automatic shutoff of at least 50% of outside lighting fixtures and all incandescent flood lamps during daylight hours.

??Per fixture of high-use ENERGY STAR® or equivalent lighting fixtures beyond required fixtures.

??Use a comprehensive approach to high-quality lighting design – points for lighting design submitted.

??Light pollution minimized through avoiding no direct beam illumination beyond visible property lines.

??Common spaces such as hallways that would otherwise require 24 hour lighting (e.g. multi-family) utilize day lighting and automatic lighting controls.

??Interior motion sensor with photocell. (1 point per fixture, maximum 3 points)

Appliances:

??Other ENERGY STAR® appliances. (1 point per appliance)

??Install a clothesline – 2 points each for indoor and outdoor permanent clotheslines. (max. 4 points)

??Install approach that meets the goal of this strategy not listed above (upon documentation and submission to VBG Program Committee).