

United States Department of Energy

Circulator Pump Rulemaking

Session 1C

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DOE – Circulator Pump Rule Making

Circulator Definition...

- Pump clean water, inline, horizontal motor configuration
- Can be...
 - Dry Rotor – up to hydraulic power @ WTW BEP \leq 5 HP
 - 2 Piece
 - 3 Piece (has bearing frame)
 - Wet Rotor



2-Piece

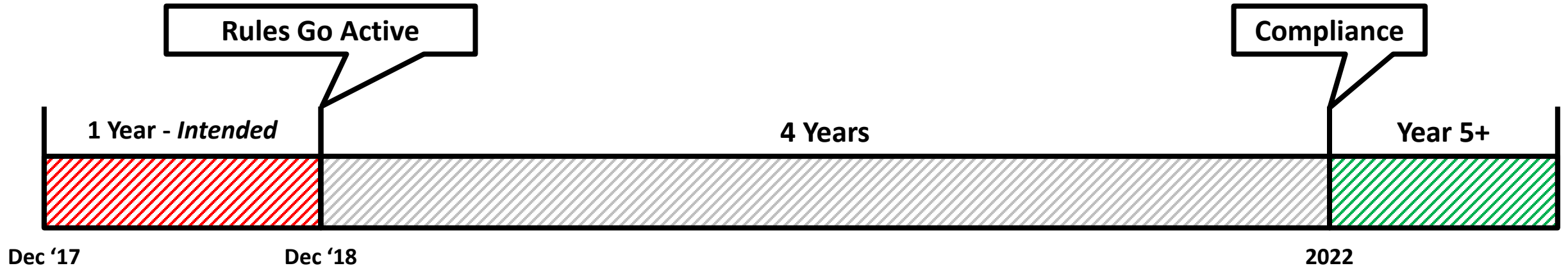
Wet Rotor



3-Piece

DOE – Circulator Pump Rule Making

Timeline...



Dec '17 – '18

- ASRAC submitted rules to DOE
 - Appliance Standards and Rulemaking Federal Advisory Committee
- Public feedback period
- Write Rule(s)
- Publish to Federal Register

DOE – Circulator Pump Rule Making

Efficiency Standards

- PER = 1.00; PEI >1.00
- Pump Efficiency Rating (minimally compliant pump – baseline) =1.00
- Pump Efficiency Index acceptable pump must be >1.00
 - Calculates based on weighted average efficiency ratings across multiple points along curve
 - kW @ BEP GPM – 100%, 75%, 50% and 25%
 - Predefined operating hours in each flow class
 - Calculators (in draft form) available on DOE website
 - Standard equates to a fixed speed circulator pump driven by an ECM with current technology

