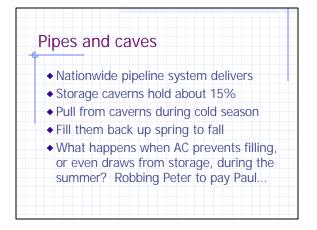
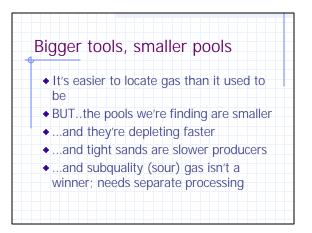


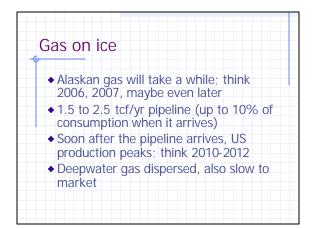
60%, • And y	port oil from overseas (about including products) es, we import gas from Canada	
	es we import das from Canada	
(3.5 t	cf/yr, 16%)	
impor	nly 1% of gas comes via LNG ts (up to 3% in two years when d LNG ports are demothballed)	





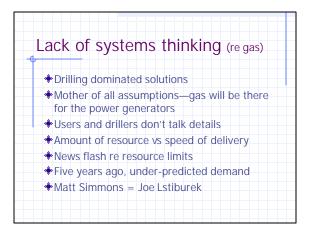
R	aging depletion
4	• "Don't go there"
4	Started out with Estimated Recoverable Resource (EUR) of about 2000-2150 trillion cubic feet (tcf)
4	We've consumed 950 tcf
4	There are 1050 – 1200 tcf left (including "undiscovered" and subquality gas)
	On a treadmill

Drill baby drill	
<ul> <li>320,000 gas wells (1 per 900 people)</li> <li>900 US rigs drilling for gas vs. 200 drilling for oil (1 per 320,000 people)</li> </ul>	
<ul> <li>Most of Canada's 550 rigs also seeking gas</li> <li>Personnel problems (mergers, retirements)</li> </ul>	
<ul> <li>Rigs are rusty; cannibalizing old for new</li> <li>Drilling to 6,000' vs. 19,000': 5-10 times slower</li> </ul>	
WCS Basin: big pools are deeper	



The Canadian Card
♦We use half their gas
They have lots in their frontier zones (some off east coast; more in the Yukon)
Some are starting to complain about prices, debate the Deal with The Devil (NAFTA)
If they ever change their minds about exports, we're in <i>deep</i> trouble
*Recently changed about exporting electricity
Export limit is projected at 5.5 – 6.0 tcf/day





P	rices (re gas)
Ť	<ul> <li>Volatility, higher price band (\$3.50 - \$6.00)</li> <li>vs. \$2 pre -2000, \$3.75 ave. for 2000</li> </ul>
	Demand can respond faster than supply     Demand <u>destruction</u> Farmland Industries: shut down some fertilizer plants     Potato flake factory in Center(CO)     Competition between consumers (esp. elec.)
	<ul> <li>North American supplies will eventually peak (30tcf/yr vs EIA's projected need of 39 tcf/yr)</li> </ul>
	<ul> <li>Price problems in advance of that peak</li> <li>Shouldn't we take the long view?</li> </ul>

Think energy system (like "house as a system")	
<ul> <li>Crude oil:</li> <li>supply/demand/price = volatile</li> <li>Non-OPEC (depletion) vs. OPEC (control)</li> <li>Weak conventional wisdom (forecasts)</li> <li>Electricity: only gas can "move fast"</li> <li>Investors: "old" vs. "new economy"</li> <li>World factors: growth, demand shifts, environmental wild cards</li> </ul>	

	oming energy policy debate
	Previous policies long on talk, short on wisdom and action
	Past efforts aimed at cheap gasoline, two-ca garages and plenty of pavement
+	Notion of geologic limits absolutely discounted, refuted: "crazy aunt in the attic"
	Drill bit gets \$\$\$ breaks to find fossils
1.4	Technology uber alles