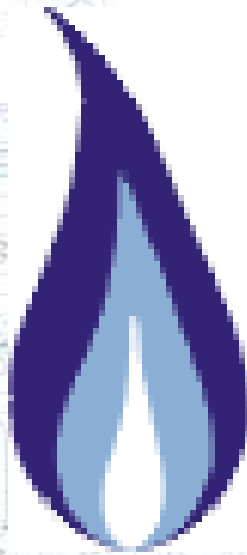


# Shape of Things to Come



**Resnet 2004**

**Kelly Parker, P.E.**

**March 1, 2004**

**3:30 p.m.-5:00 p.m.**

# Impact of Cost (Natural Gas) on Upgrades in Houston, Texas





# RESNET COST-EFFECTIVENESS ANALYSIS

Houston, Texas utility rates

	HOUSE #1 on Slab			HOUSE #2 on Slab			HOUSE #2 on Crawl Space		
	1120 SqFt Ranch			2240 SqFt 2-Story			2240 SqFt 2-Story		
	Design	Upgrade		Design	Upgrade		Design	Upgrade	
<b>Energy Score</b>	<b>83</b>	<b>89.1</b>		<b>85.1</b>	<b>91.7</b>		<b>85</b>	<b>91.7</b>	
<b>IECC Score (%above)</b>	<b>5.3</b>	<b>29.1</b>		<b>6.2</b>	<b>33.5</b>		<b>5.7</b>	<b>34.1</b>	
<b>RESNET Design</b>									
House Leakage (NACH)	0.5	0.35		0.5	0.35		0.5	0.35	
Windows (SHGC)	0.62	0.35		0.62	0.35		0.62	0.35	
Hot Water Tank (EF)	0.53	0.63		0.53	0.63		0.53	0.63	
AC (SEER)	10	12		10	12		10	12	
Duct Leakage (% Total)	25	5		10	0		10	0	
<b>Energy Costs /Yr</b>			<b>Annual Savings</b>			<b>Annual Savings</b>			<b>Annual Savings</b>
Natural Gas	\$359	\$284	\$75	\$447	\$349	\$98	\$418	\$323	\$95
Electric	\$929	\$750	\$179	\$1,065	\$772	\$293	\$1,077	\$781	\$296
<b>End-Use Costs /Yr</b>			<b>Annual Savings</b>			<b>Annual Savings</b>			<b>Annual Savings</b>
Heating	\$140	\$104	\$36	\$228	\$169	\$59	\$199	\$143	\$56
Cooling	\$415	\$245	\$170	\$537	\$257	\$280	\$548	\$266	\$282
Water Heating	\$219	\$180	\$39	\$219	\$180	\$39	\$219	\$180	\$39