

1 operations, need to dedicate resources to maintaining and complying with  
2 Texas SET requirements on an ongoing basis

3

4 Q. HOW DOES THE DEVELOPMENT AND IMPLEMENTATION OF  
5 ERCOT'S SYSTEMS COMPARE TO THE EFFORT REQUIRED BY  
6 EGSI?

7 A. There are two principal differences between ERCOT's implementation  
8 effort and the effort required by the Company: the functional scope and  
9 the implementation timeline.

10 Regarding the functional scope, the difference between ERCOT  
11 and EGSI is that the Company, like ERCOT itself, had to develop systems  
12 and capabilities to perform for ESAT the same centralized functions  
13 performed by ERCOT, but EGSI *also* had to provide all the labor, systems  
14 and processes necessary to put itself in a position of becoming an  
15 *unbundled participant* in that same market.

16 Specifically, the Company was similar to ERCOT in that it had to  
17 build and provide the load profiling and data aggregation functionality for  
18 the ESAT region in the same fashion that ERCOT performs these  
19 functions for retail choice in the ERCOT region. In addition to the  
20 Company performing the data aggregation and load profiling that ERCOT  
21 provides for the ERCOT IOUs, in parallel with ERCOT's system  
22 development, the Company was also developing a new system to support  
23 the new Texas market retail transaction requirements. It is important to

1       note that electric utilities in the ERCOT region served a dual role during  
2       the pilot project—as vertically-integrated utilities providing electricity to  
3       retail customers who did not participate in the pilot, and as TDSPs to  
4       deliver power to customers who switched to REPs. EGSi maintained  
5       those two roles and also a third role to apply load profiles and aggregated  
6       meter data for the ESAT region in the same fashion that ERCOT does.

7               ERCOT and EGSi also had vast differences in functional  
8       requirements. For example, ERCOT was consolidating control areas and  
9       implementing significant wholesale market operations functions and  
10      changes to its Energy Management System where the Company was not  
11      required to implement similar functions. On the other side, however, EGSi  
12      was preparing for business separation and asset unbundling that ERCOT  
13      did not have to perform.

14             The second principal difference is the implementation timeline.  
15      While the official start of the pilot project was June 1, 2001, with full retail  
16      access on January 1, 2002, there were many activities that started for  
17      ERCOT before that date, such as the development of market rules and  
18      protocols, and the design and testing of computer and communications  
19      systems. As I discussed earlier in my testimony, ERCOT developed bid  
20      documents during the fall of 1999 to acquire the systems necessary to  
21      support the restructuring of the Texas electric market. This equates to  
22      approximately 26 months of defining the requirements and completing the  
23      design, development and testing of the retail applications before

1           transitioning to full retail choice. In contrast, EGSi also underwent an  
2           aggressive development and testing program to participate in the pilot by  
3           June 1, 2001, but was then required to maintain its ongoing  
4           communications and technical connectivity to keep its pilot operational  
5           until July 2004, equating to 60 months from initiation through termination  
6           of pilot operations.

7

8    Q.    HOW MUCH DID ERCOT SPEND TO MEET THE REQUIREMENTS OF  
9           SB 7?

10   A.   In my research, I found a statement by Sam Jones, the Chief Operating  
11           Officer for ERCOT, made at a FERC Conference on Standard Market  
12           Design held January 23, 2002. Mr. Jones stated that "[t]he total wholesale  
13           and retail conversion cost was in the neighborhood of \$120 million for  
14           facilities and systems." The excerpt of this discussion is included in  
15           Exhibit VGC-7, FERC SMD Conference Transcript Excerpt. Mr. Jones  
16           also stated "[t]he retail and the wholesale was so intermixed," indicating  
17           that it is very difficult to distinguish the costs between wholesale or retail  
18           functions. While this presents an apples-to-oranges comparison to the  
19           Company because the functional scope was different in many regards, I  
20           include this number to provide a frame of reference of the costs ERCOT  
21           incurred to launch the ERCOT market.

1 Q. ARE THERE ASPECTS OF ERCOT'S EFFORT TO MEET THE  
2 REQUIREMENTS OF SB 7 THAT ARE COMPARABLE TO THE  
3 COMPANY?

4 A. Yes. Both ERCOT and the Company were on very tight implementation  
5 timescales, each initiating an aggressive system design and  
6 implementation schedule to meet a targeted June 1, 2001 start of a retail  
7 choice pilot shortly after SB 7 was signed by the Texas Legislature. In  
8 fact, all Texas market participants were undergoing significant  
9 development efforts to build systems and processes to support the new  
10 market. This intense implementation effort throughout the state created a  
11 shortage of resources available with energy restructuring expertise. For  
12 example, in the 2001 ERCOT Readiness update, attached to my  
13 testimony at Exhibit VGC-3, ERCOT System Overview, ERCOT reported  
14 that during the peak of development, nearly 300 developers, engineers,  
15 and analysts were working on the new ERCOT systems. Likewise, EGSI  
16 also was in need of, and relying on outside experts and developers, in  
17 part, to prepare the systems necessary to participate in the pilot and,  
18 ultimately, ROA. This indicates to me that entities preparing for retail  
19 choice in Texas were largely competing for outside expertise, and I factor  
20 this condition into the assumptions that I have made in creating an  
21 estimation model that I discussed in Section III of my testimony.

1 Q. AFTER THE COMPLETION OF THE PILOT AND THE START OF FULL  
2 RETAIL CHOICE ON JANUARY 1, 2002, DID ERCOT SEE A DECLINE  
3 IN ITS COSTS?

4 A. No. ERCOT's operational costs continued to rise through 2004. Margot  
5 Lutzenheiser, an associate economist for the Public Power Council  
6 performed a "Comparative Analysis of RTO/ISO Operating Costs,"  
7 attached to my testimony as Exhibit VGC-8, RTO Comparative Analysis.  
8 In Ms. Lutzenheiser's report, she captures how ERCOT's Annual  
9 Operating Expenses skyrocketed from approximately \$20 million in the  
10 year 2000 to over \$138 million budgeted in 2004, representing over a six-  
11 fold increase.

12

13 Q. ARE ERCOT'S RISING COSTS RELEVANT TO THIS PROCEEDING?

14 A. Yes. I think the increasing costs of supporting a retail market and the  
15 volume of changes that have occurred, and continue to occur, indicate  
16 that effective market implementation has cost more than originally  
17 anticipated and tasks were harder to do than expected. The Texas  
18 competitive market is the result of an on-going, stakeholder driven,  
19 evolutionary process. Over 328 protocol change requests alone were  
20 submitted between the actual start of the retail pilot on July 31, 2001 and  
21 the end of 2004. In a nutshell, the intensity and the workload continued  
22 after the market started.

1 Q. WHY ARE ERCOT'S CHANGING MARKET REQUIREMENTS  
2 RELEVANT TO THE COMPANY'S TRANSITION TO RETAIL CHOICE?

3 A. Every retail transaction change, system change, or protocol change that  
4 occurred in the ERCOT market that impacted *retail* operations had to be  
5 monitored, mirrored, and tested by the Company because ERCOT  
6 centrally administered retail transactions statewide. In essence, even  
7 though the EGSi pilot had much smaller customer participation than full  
8 ROA in ERCOT, the Company was subject to all of the retail requirements  
9 that were driven and modified in the ERCOT stakeholder process. The  
10 workload that ERCOT required to sustain a robust retail market is corollary  
11 to the effort the Company incurred to maintain pilot operations.

12

13 Q. SHOULD THE NUMBER OF UTILITY CUSTOMERS BE A PRINCIPAL  
14 OR SOLE DRIVER OF A UTILITY'S TRANSITION COSTS?

15 A. No. The number of customers served by a utility is neither the principal  
16 nor the sole driver of the amount of transition costs incurred by a utility.  
17 The more significant cost drivers with regard to transitioning from a  
18 regulated market to a competitive market is "time to implement" the  
19 systems and the complexity of the market structure. The transition costs I  
20 compare fall into two broad categories: (1) regulatory-related costs, and  
21 (2) utility business processes and systems changes. I understand that  
22 Company witness May discusses at length in his testimony the regulatory  
23 process in Texas as enormous, complex, and lengthy. The Company's

1           TTC costs were incurred over a six-year period, rather than a shorter two  
2           and one-half-year period, as was originally anticipated through SB 7.  
3           Further, I understand that this effort required significant support by outside  
4           counsel, with regard to both time and expense, for the over 50 dockets  
5           and rulemakings in which the Company was involved. In that regard, SB 7  
6           placed a similar regulatory burden on the Texas portion of EGSi as it did  
7           for TXU Electric Company and Reliant Energy Inc., despite the  
8           significantly greater size of the latter two companies.

9           The second driver of cost is the change needed in the utility  
10          business processes and systems. The Texas market structure and the  
11          ERCOT Protocols are complex and created large volumes of transactions.  
12          The volume of transactions and the complexity of rules demanded robust  
13          systems and controls to appropriately support the level of service  
14          envisioned by the Commission. Given the comprehensive requirements of  
15          the Texas market rules and ERCOT Protocols, and the volume of  
16          transactions and customers, the creation of a comprehensive retail market  
17          solution was a very significant effort.

18

19           V.     REASONABLENESS OF EGSi TRANSITION COSTS

20    Q.     HOW IS THIS SECTION OF YOUR TESTIMONY ORGANIZED?

21    A.     In this section, I discuss the reasonableness of EGSi's transition costs,  
22           and cost control and reductions mechanisms that I understand the  
23           Company used to manage the total transition costs.

1 Q. ARE THE TRANSITION COSTS REQUESTED BY EGSI REASONABLE?

2 A. Yes. In comparing just the two categories of EGSI TTC cost on which I  
3 have focused (approximately \$144 million)<sup>1</sup> to the results of my estimation  
4 model for implementing ROA in ESAT (approximately \$169 million),  
5 EGSI's request is significantly lower than the estimate. When considering  
6 this range and the nature of the more than five-year transition that EGSI  
7 experienced from 1999 through June 2005, I conclude that EGSI's TTC  
8 costs are reasonable. Furthermore, compared to the estimate I derived,  
9 the Company acted prudently to manage costs of its expenditures as its  
10 requested costs in these categories were below my estimate. If I were to  
11 include an AFUDC component in my estimate model figures, which would  
12 be reasonable in light of the length of the transition period experienced by  
13 EGSI, my figures would be even larger in comparison to EGSI's TTC  
14 requested costs.

15

16 Q. WHY DO YOU BELIEVE EGSI HAD TRANSITION COSTS BELOW  
17 YOUR COST ESTIMATE?

18 A. The Company used a combination of cost controls, project ramp-down  
19 and outsourcing as mechanisms to effectively manage their overall project  
20 costs.

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<sup>1</sup> Again, the two categories of EGSI's TTC costs on which I focused do not include the Company's System Benefit Fund & RECs class; the Energy Efficiency class, or the Rates/Riders Preparation class.



1                   First, addressing cost controls, I understand the Company reviewed  
2                   the time and expenses of internal resources for reasonableness and  
3                   adherence to travel and accounting policies. I also know from direct  
4                   experience that invoices of outside services were reviewed for  
5                   reasonableness prior to authorizing payment. This audit and review  
6                   mechanism generally assists in mitigating unexpected costs that  
7                   sometimes arise over long-term projects without adequate checks and  
8                   balances. Secondly, during times when the near-term commencement of  
9                   ROA in ESAT became less certain, EGSI significantly reduced the  
10                  resources allocated to transition efforts, allowing for cost savings. While  
11                  my estimation model does have a natural ramp-down and decline of  
12                  resources allocated to the project, I understand that EGSI took a more  
13                  dramatic approach to reducing headcount during these times of  
14                  uncertainty, thus reducing the resource costs. Finally, the Company  
15                  outsourced its Information Technology function. The Company  
16                  successfully moved 350 former Entergy employees and 100 contractors to  
17                  an outsource company's payroll, and the outsourcing agency also agreed  
18                  to provide direction to 160 Entergy-retained employees whose services  
19                  and costs are part of its contractual incentives. This structural change  
20                  leads me to believe that the Company was able to better manage its  
21                  transition costs by reducing its operational and infrastructure costs through  
22                  outsourcing agreements.

1 VI. CONCLUSION

2 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

3 A. Yes, at this time.

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# TTC FOUNDATION CHART

Witnesses		General Category of Cost
Phillip May	<div> <div>PLANNING AND REGULATORY \$27.7MM</div> <div>IMPLEMENTATION MANAGEMENT \$15.6MM</div> </div>	Plan, Develop Rules & Business Support <b>\$43.3MM</b> (26%)
Tom Manasco	<div> <div>TEXAS SET AND LOAD PROFILING AND DATA AGGREGATION \$46.5MM</div> <div>PILOT OPERATIONS \$11.1MM</div> <div>PILOT PROJECT \$0.8MM</div> </div>	Design, Build, Test, Pilot & Maintain Systems <b>\$101MM</b> (62%)
Bill Craddock	TEXAS DISTRIBUTION CCS \$13MM	
Phillip May	DEFAULT SERVICE PROVIDER \$13.6MM	
Andy Quick	<div>CUSTOMER SERVICE \$8.6MM</div> <div>LOAD FORECASTING \$3MM</div> <div>RETAIL SET \$2.5MM</div> <div>TRADING AND RISK MANAGEMENT \$1.9MM</div>	
Phillip May	SYSTEM BENEFIT FUND/ RENEWABLE ENERGY CREDITS \$7.4MM	Other SB7 Requirements \$13.6MM (8%)
Karen Radosevich	ENERGY EFFICIENCY PROGRAMS \$6.2MM	
Phillip May	RATES/RIDERS PREPARATION \$6.3MM	Rate Filing Costs \$6.3MM (4%)
		<b>TOTAL \$164.2MM</b>

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## EGSI Comparative Cost Estimate

### Workbook Overview and Guidelines

#### ***This workbook is organized as follows:***

- Contents shows the table of contents for all Schedules and Workpapers.
- Each major area of analysis is represented by a Schedule.
- The results and inputs on the Schedules will reference their source, primarily with references to Workpapers.
- Each Workpaper will provide drill-down detail for the information summarized on Schedules.
- The Schedules are numbered S1, S2 etc.
- The Factors tab contains input variables that are used on multiple Workpapers or have a high likelihood of sensitivity analysis.
- Other input variables that are only used in one Workpaper will be housed in that Workpaper.

#### ***This workbook is guided by the following objectives:***

- The workbook will be simple and flexible, yet thorough. It is intended to present cost estimate.
- Impact assessment for changes in inputs will be quick.
- Benchmark data from other markets will be provided where relevant.

#### **Cost Analysis Assumptions:**

- All currency is presented in US dollars.
- Dollars are undiscounted and in 2005 dollars
- Transition costs are represented as total dollars
- Transition costs are represented as total dollars
- Timeline covers 1-Jun-1999 to 1-Sep-2004

## EGSI Comparative Cost Estimate Index of Schedules and Workpapers

Schedules	
S1	Schedule 1: Summary of Total Transition Costs
Workpapers	
W1	Workpaper 1: External Resource Consulting and Development
W2	Workpaper 2: Internal Resource Loading Detail by Role
W3	Workpaper 3: Facilities Summary
W4	Workpaper 4: Systems Summary
W5	Workpaper 5: Other Transition Expenses Summary
Input and Reference Tables	
I1	Input 1: Estimating Factors
I2	Input 2: Resource Salary/Cost
I3	Input 3: Internal Resource Loading Detail by Role
R1	Reference 1: Benchmark References
R2	Reference 2: Chart Supporting Material
R3	Reference 3: Internal FTE Resource Loading by Project
R4	Reference 5: External FTE Resource Loading by Project
R5	Reference 6 : Internal and External FTE Resource Loading by Employee Type
R6	Reference 7: FTE Resource Loading Comparison
R7	Reference 8: Total FTE Resource Count by Project
Version Notes:	
<p>Roll-up estimate by year of Transition and Operating Costs</p> <p>Detailed cost estimate of external FTE resources Detailed cost estimate of internal FTE resources Detailed cost summary of facilities Detailed cost summary of systems by division Summary of other transition costs</p> <p>Input variables that are used on multiple Schedules and Workpapers Salary Scale and steps based on labor statistics Hiring Rate and Salary Correlation Document sources for benchmarks and comparison data Data used by charts in reference section Chart of number of internal FTEs by project and quarter Chart of number of external FTEs by project and quarter Chart of number of FTE resources by employee type Chart comparison of Internal to External FTE loadings Chart of total resources by project</p>	

# EGSI Comparative Cost Estimate

## Input 1: Estimating Factors

Category	Type	Factor Name	Description	Estimate	Data Source / Basis for Estimate
Facilities	Calculated	# workstations	Number of Workstations	137	Org Design - scaled based on headcount
Facilities	Direct	\$ utilities per em	Annual electricity cost, water, fuel oil, waste disposal per employee	1,518 [E1]	ERCOT: \$759,000 in 2004\$
Facilities	Direct	\$ building services per em	Annual security services, custodial and ground maintenance	3,002	ERCOT Rate Case with employee adjustment
Facilities	Direct	\$ workstation	Cost per Workstation	2,500	American Productivity & Quality Center (APQC): \$2,500
Facilities	Direct	\$ lease ft	Cost per sq. ft of leased space per year	19.00	
Facilities	Direct	# ft per employee	Number of square feet to allocated per employee	160	officefinder.com
Facilities	Direct	\$ furniture lease per ft	Annual furniture lease per sq ft	\$5	5-10/sq ft per year for 5 year lease http://www.fastinfo.com/FastInfo/info5.asp
Facilities	Direct	\$ miscellaneous	Number of years of utilities, telecom, etc incurred during transition	5.00	
General	Direct	# initial load	Annual miscellaneous cost	15,925	ERCOT Rate Case with employee adjustment
General	Direct	# corporate members	Initial MW Annual Consumption (MWh)	3,652	Peak Load for pilot customers
General	Direct	\$ non-ERCOT_LSE_Fee	Number of Market Participants		Based on participation from market rule development
General	Direct	# ESI_ID	Annual Fee per ESI ID to non-ERCOT LSEs	1.15	\$1.15 per ESI per year
General	Direct	\$ CIS_fee_per_ESI_ID	Number of ESI ID	383,500	Number of Customer in ESAT Pilot
General	Direct	\$ per meter fee	Average license cost per ESI ID to purchase a CIS system	0.3	[TMOG] Utilities can expect to spend between \$3.00 and \$7.00 per customer
Infrastructure	Direct	\$ meter operating cost	Monthly meter fee for use of EDI Clearinghouse	1.00	[PLX1] Average monthly operating cost of interval or profiled meters is \$1-\$2
Infrastructure	Direct	\$ profiling_per_month_per_customer	Approximate monthly operating costs for hourly meters	0.05	[PLX1] On a per customer basis, averages \$.05 to \$.25 per customer per month
General	Direct	% capital_interest_rate	Average monthly load research and analysis costs per customer	6%	
General	Direct	% om_rate	Operation & Maintenance rate (percentage)	20%	Industry Standard
General	Direct	\$ average_monthly_expense	Average monthly expenses for consultants	3,000	
Infrastructure	Direct	\$ communications	Annual cost for meetings, events, communication, publications, printing, etc	125,000	Facility space and documentation of materials for PUC workshops, etc
Infrastructure	Direct	\$ per hourly meter	Average cost to install retail compliant metering	1,000	[PLX1] Average hourly metering at commercial sites
Infrastructure	Calculated	% hourly noncompliant meters	Average percentage of meters requiring upgrade to be retail compliant	0.5%	
Infrastructure	Calculated	\$ data service per em	Annual fiber cost, internet service, O3C (all non-WAN data)	1,947	ERCOT Rate Case with employee adjustment
Infrastructure	Direct	\$ wan cost	Annual WAN cost	500	[E1] ERCOT: \$462,120 in 2004\$
Personnel	Calculated	\$ voice service per em	Annual telephone, long-distance, telecom, wireless/cell	113.75	
Personnel	Direct	# employees	Peak Internal Resources	5,000	[E1] ERCOT: \$5,000/ft-yr approximately
Personnel	Direct	\$ expenses_per_ft	Annual expenses per employee	500	Not required for pilot or TDSP operations
Personnel	Direct	\$ other_expenses_per_ft	Training, Travel & Other Employee Expenses	1,000	Industry Standard
Personnel	Direct	\$ supplies_per_ft	Annual supplies per employee	25%	
Personnel	Direct	% loading rate	Benefit loading rate per employee	3%	Payroll = 1% of salary expense, benefit administration = 2%
Personnel	Direct	% payroll_benefit_administration	Loading cost for payroll and benefits administration	2.5%	COLA Average from 1999-2004
Personnel	Direct	% annual_salary_escalation	Percent of annual salary escalation	2.0%	
Personnel	Direct	% transition_recruiting	Percent of start up labor costs for recruiting and relocations	3,000	
Personnel	Direct	\$ new_employee_transition	Cost per new employee joining project team		



**25%**

Grade	Minimum Salary	Maximum Salary	Step	Rate	Rate
1	37500	30000			90
2	50000	40000		\$ 350	130
3	62500	50000		\$ 250	160
4	75000	60000		\$ 200	160
5	93750	75000		\$ 150	160
6	106250	85000		\$ 100	160
7	125000	100000			
8	150000	120000			
Exec1	437500	350000			
Exec2	281250	225000			
Exec3	250000	200000			
Partner	378000	378000			
Senior Manager	390000	390000			
Manager	384000	384000			
Consultant	288000	288000			
Analyst	192000	192000			

EGSI Comparative Cost Estimate  
Table 3: Internal Resource Loading Detail by Role

Line	Project	Resource	Role	Start Date	End Date	Hours	Rate	Cost	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341	3342	3343	3344	3345	3346	3347	3348	3349	3350	3351	3352	3353	3354	3355	3356	3357	3
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[illegible]

Project Overview										Financial Performance										Operational Metrics										Risk Assessment									
Project Details					Key Milestones					Budget & Spend					Revenue & Profit					Efficiency & Quality					Compliance & Safety					Incident Response					Future Outlook				
ID	Name	Type	Status	Priority	Start Date	End Date	Progress %	Owner	Team Lead	Budget (k\$)	Actual (k\$)	Variance (k\$)	Revenue (k\$)	Profit (k\$)	Margin %	Efficiency Score	Quality Index	Compliance Rate	Safety Incidents	Incident Type	Resolution Time (h)	Future Impact	Forecast Q1	Forecast Q2	Forecast Q3	Forecast Q4	Forecast YTD												
1	Project Phoenix	Software Development	In Progress	High	2023-01-15	2023-06-30	75%	John Doe	Jane Smith	1200	1150	50	1500	300	20%	85	92	98%	0	Minor Bug	24	Positive	1500	1600	1700	1800	1650												
2	Project Orion	Hardware Upgrade	Completed	Medium	2022-03-01	2022-12-31	100%	Mike Chen	Sarah Lee	800	810	-10	900	180	20%	90	88	99%	1	Hardware Failure	48	Neutral	900	920	940	960	930												
3	Project Vega	Cloud Migration	On Hold	Low	2023-02-01	2023-09-30	30%	Emily White	David Brown	500	480	20	600	120	20%	78	85	95%	2	Security Audit	72	Negative	600	580	560	540	570												
4	Project Atlas	Marketing Campaign	Planning	Medium	2023-07-01	2023-10-31	10%	Chris Taylor	Alex Johnson	300	320	-20	400	80	20%	82	80	97%	0	None	36	Positive	400	420	440	460	430												
5	Project Hydra	Infrastructure Upgrade	Testing	High	2022-09-01	2023-03-31	90%	Robert Kim	Laura Garcia	900	920	-20	1000	200	20%	88	90	99%	1	Network Outage	60	Neutral	1000	1020	1040	1060	1030												
6	Project Prometheus	AI Research	Research	High	2023-04-01	2024-03-31	20%	Dr. Anya Petrov	Prof. James Wilson	1800	1700	100	2000	400	20%	70	75	90%	3	Data Breach	96	Negative	2000	1900	1800	1700	1950												
7	Project Cerberus	Mobile App Dev	Development	Medium	2023-05-01	2023-11-30	60%	Kevin Park	Mia Rodriguez	400	410	-10	500	100	20%	80	82	96%	0	None	48	Positive	500	520	540	560	530												
8	Project Hydra	Blockchain Integration	Analysis	Low	2023-08-01	2024-01-31	15%	Olivia Chen	Noah Davis	250	260	-10	300	60	20%	75	78	92%	1	Smart Contract Error	36	Neutral	300	290	280	270	295												
9	Project Hydra	IoT Network Setup	Deployment	Medium	2022-11-01	2023-05-31	85%	Daniel Kim	Sophia Lee	600	610	-10	700	140	20%	83	85	98%	2	Sensor Malfunction	48	Positive	700	720	740	760	730												
10	Project Hydra	AR/VR Development	Concept	Low	2023-09-01	2024-06-30	5%	Grace Kim	Henry Lee	350	360	-10	450	90	20%	72	75	91%	0	None	42	Positive	450	460	470	480	465												
11	Project Hydra	Quantum Computing	Research	High	2023-10-01	2025-03-31	10%	Isabella Kim	Jack Lee	2000	1900	100	2200	400	20%	65	70	85%	4	Quantum Decoherence	120	Negative	2200	2100	2000	1900	2150												
12	Project Hydra	Space Exploration	Planning	Medium	2024-01-01	2026-12-31	5%	Kyle Kim	Liam Lee	1500	1450	50	1700	300	20%	60	65	80%	5	Launch Failure	180	Negative	1700	1600	1500	1400	1650												
13	Project Hydra	Autonomous Vehicles	Testing	High	2022-06-01	2023-08-31	95%	Mia Kim	Noah Lee	700	710	-10	800	160	20%	87	89	99%	1	Sensor Calibration	36	Positive	800	820	840	860	830												
14	Project Hydra	Biotech Research	Analysis	Low	2023-11-01	2025-06-30	10%	Olivia Kim	Peter Lee	1000	980	20	1100	200	20%	68	72	88%	3	Genetic Mutation	108	Negative	1100	1050	1000	950	1075												
15	Project Hydra	Robotics Development	Assembly	Medium	2023-01-01	2023-07-31	80%	Quinn Kim	Rachel Lee	550	560	-10	650	130	20%	84	86	97%	2	Assembly Line Error	48	Positive	650	670	690	710	680												
16	Project Hydra	Augmented Reality	Development	Medium	2023-03-01	2023-09-30	70%	Sam Kim	Tina Lee	450	460	-10	550	110	20%	81	83	96%	0	None	54	Positive	550	570	590	610	580												
17	Project Hydra	Virtual Reality	Development	Medium	2023-04-01	2023-10-31	65%	Uma Kim	Victor Lee	400	410	-10	500	100	20%																								

Line	Project	Category	Sub-Category	Item	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54	2054/55	2055/56	2056/57	2057/58	2058/59	2059/60	2060/61	2061/62	2062/63	2063/64	2064/65	2065/66	2066/67	2067/68	2068/69	2069/70	2070/71	2071/72	2072/73	2073/74	2074/75	2075/76	2076/77	2077/78	2078/79	2079/80	2080/81	2081/82	2082/83	2083/84	2084/85	2085/86	2086/87	2087/88	2088/89	2089/90	2090/91	2091/92	2092/93	2093/94	2094/95	2095/96	2096/97	2097/98	2098/99	2099/100	2100/101	2101/102	2102/103	2103/104	2104/105	2105/106	2106/107	2107/108	2108/109	2109/110	2110/111	2111/112	2112/113	2113/114	2114/115	2115/116	2116/117	2117/118	2118/119	2119/120	2120/121	2121/122	2122/123	2123/124	2124/125	2125/126	2126/127	2127/128	2128/129	2129/130	2130/131	2131/132	2132/133	2133/134	2134/135	2135/136	2136/137	2137/138	2138/139	2139/140	2140/141	2141/142	2142/143	2143/144	2144/145	2145/146	2146/147	2147/148	2148/149	2149/150	2150/151	2151/152	2152/153	2153/154	2154/155	2155/156	2156/157	2157/158	2158/159	2159/160	2160/161	2161/162	2162/163	2163/164	2164/165	2165/166	2166/167	2167/168	2168/169	2169/170	2170/171	2171/172	2172/173	2173/174	2174/175	2175/176	2176/177	2177/178	2178/179	2179/180	2180/181	2181/182	2182/183	2183/184	2184/185	2185/186	2186/187	2187/188	2188/189	2189/190	2190/191	2191/192	2192/193	2193/194	2194/195	2195/196	2196/197	2197/198	2198/199	2199/200	2200/201	2201/202	2202/203	2203/204	2204/205	2205/206	2206/207	2207/208	2208/209	2209/210	2210/211	2211/212	2212/213	2213/214	2214/215	2215/216	2216/217	2217/218	2218/219	2219/220	2220/221	2221/222	2222/223	2223/224	2224/225	2225/226	2226/227	2227/228	2228/229	2229/230	2230/231	2231/232	2232/233	2233/234	2234/235	2235/236	2236/237	2237/238	2238/239	2239/240	2240/241	2241/242	2242/243	2243/244	2244/245	2245/246	2246/247	2247/248	2248/249	2249/250	2250/251	2251/252	2252/253	2253/254	2254/255	2255/256	2256/257	2257/258	2258/259	2259/260	2260/261	2261/262	2262/263	2263/264	2264/265	2265/266	2266/267	2267/268	2268/269	2269/270	2270/271	2271/272	2272/273	2273/274	2274/275	2275/276	2276/277	2277/278	2278/279	2279/280	2280/281	2281/282	2282/283	2283/284	2284/285	2285/286	2286/287	2287/288	2288/289	2289/290	2290/291	2291/292	2292/293	2293/294	2294/295	2295/296	2296/297	2297/298	2298/299	2299/300	2300/301	2301/302	2302/303	2303/304	2304/305	2305/306	2306/307	2307/308	2308/309	2309/310	2310/311	2311/312	2312/313	2313/314	2314/315	2315/316	2316/317	2317/318	2318/319	2319/320	2320/321	2321/322	2322/323	2323/324	2324/325	2325/326	2326/327	2327/328	2328/329	2329/330	2330/331	2331/332	2332/333	2333/334	2334/335	2335/336	2336/337	2337/338	2338/339	2339/340	2340/341	2341/342	2342/343	2343/344	2344/345	2345/346	2346/347	2347/348	2348/349	2349/350	2350/351	2351/352	2352/353	2353/354	2354/355	2355/356	2356/357	2357/358	2358/359	2359/360	2360/361	2361/362	2362/363	2363/364	2364/365	2365/366	2366/367	2367/368	2368/369	2369/370	2370/371	2371/372	2372/373	2373/374	2374/375	2375/376	2376/377	2377/378	2378/379	2379/380	2380/381	2381/382	2382/383	2383/384	2384/385	2385/386	2386/387	2387/388	2388/389	2389/390	2390/391	2391/392	2392/393	2393/394	2394/395	2395/396	2396/397	2397/398	2398/399	2399/400	2400/401	2401/402	2402/403	2403/404	2404/405	2405/406	2406/407	2407/408	2408/409	2409/410	2410/411	2411/412	2412/413	2413/414	2414/415	2415/416	2416/417	2417/418	2418/419	2419/420	2420/421	2421/422	2422/423	2423/424	2424/425	2425/426	2426/427	2427/428	2428/429	2429/430	2430/431	2431/432	2432/433	2433/434	2434/435	2435/436	2436/437	2437/438	2438/439	2439/440	2440/441	2441/442	2442/443	2443/444	2444/445	2445/446	2446/447	2447/448	2448/449	2449/450	2450/451	2451/452	2452/453	2453/454	2454/455	2455/456	2456/457	2457/458	2458/459	2459/460	2460/461	2461/462	2462/463	2463/464	2464/465	2465/466	2466/467	2467/468	2468/469	2469/470	2470/471	2471/472	2472/473	2473/474	2474/475	2475/476	2476/477	2477/478	2478/479	2479/480	2480/481	2481/482	2482/483	2483/484	2484/485	2485/486	2486/487	2487/488	2488/489	2489/490	2490/491	2491/492	2492/493	2493/494	2494/495	2495/496	2496/497	2497/498	2498/499	2499/500	2500/501	2501/502	2502/503	2503/504	2504/505	2505/506	2506/507	2507/508	2508/509	2509/510	2510/511	2511/512	2512/513	2513/514	2514/515	2515/516	2516/517	2517/518	2518/519	2519/520	2520/521	2521/522	2522/523	2523/524	2524/525	2525/526	2526/527	2527/528	2528/529	2529/530	2530/531	2531/532	2532/533	2533/534	2534/535	2535/536	2536/537	2537/538	2538/539	2539/540	2540/541	2541/542	2542/543	2543/544	2544/545	2545/546	2546/547	2547/548	2548/549	2549/550	2550/551	2551/552	2552/553	2553/554	2554/555	2555/556	2556/557	2557/558	2558/559	2559/560	2560/561	2561/562	2562/563	2563/564	2564/565	2565/566	2566/567	2567/568	2568/569	2569/570	2570/571	2571/572	2572/573	2573/574	2574/575	2575/576	2576/577	2577/578	2578/579	2579/580	2580/581	2581/582	2582/583	2583/584	2584/585	2585/586	2586/587	2587/588	2588/589	2589/590	2590/591	2591/592	2592/593	2593/594	2594/595	2595/596	2596/597	2597/598	2598/599	2599/600	2600/601	2601/602	2602/603	2603/604	2604/605	2605/606	2606/607	2607/608	2608/609	2609/610	2610/611	2611/612	2612/613	2613/614	2614/615	2615/616	2616/617	2617/618	2618/619	2619/620	2620/621	2621/622	2622/623	2623/624	2624/625	2625/626	2626/627	2627/628	2628/629	2629/630	2630/631	2631/632	2632/633	2633/634	2634/635	2635/636	2636/637	2637/638	2638/639	2639/640	2640/641	2641/642	2642/643	2643/644	2644/645	2645/646	2646/647	2647/648	2648/649	2649/650	2650/651	2651/652	2652/653	2653/654	2654/655	2655/656	2656/657	2657/658	2658/659	2659/660	2660/661	2661/662	2662/663	2663/664	2664/665	2665/666	2666/667	2667/668	2668/669	2669/670	2670/671	2671/672	2672/673	2673/674	2674/675	2675/676	2676/677	2677/678	2678/679	2679/680	2680/681	2681/682	2682/683	2683/684	2684/685	2685/686	2686/687	2687/688	2688/689	2689/690	2690/691	2691/692	2692/693	2693/694	2694/695	2695/696	2696/697	2697/698	2698/699	2699/700	2700/701	2701/702	2702/703	2703/704	2704/705	2705/706	2706/707	2707/708	2708/709	2709/710	2710/711	2711/712	2712/713	2713/714	2714/715	2715/716	2716/717	2717/718	2718/719	2719/720	2720/721	2721/722	2722/723	2723/724	2724/725	2725/726	2726/727	2727/728	2728/729	2729/730	2730/731	2731/732	2732/733	2733/734	2734/735	2735/736	2736/737	2737/738	2738/739	2739/740	2740/741	2741/742	2742/743	2743/744	2744/745	2745/746	2746/747	2747/748	2748/749	2749/750	2750/751	2751/752	2752/753	2753/754	2754/755	2755/756	2756/757	2757/758	2758/759	2759/760	2760/761	2761/762	2762/763	2763/764	2764/765	2765/766	2766/767	2767/768	2768/769	2769/770	2770/771	2771/772	2772/773	2773/774	2774/775	2775/776	2776/777	2777/778	2778/779	2779/780	2780/781	2781/782	2782/783	2783/784	2784/785	2785/786	2786/787	2787/788	2788/789	2789/790	2790/791	2791/792	2792/793	2793/794	2794/795	2795/796	2796/797	2797/798	2798/799	2799/800	2800/801	2801/802	2802/803	2803/804	2804/805	2805/806	2806/807	2807/808	2808/809	2809/810	2810/811	2811/812	2812/813	2813/814	2814/815	2815/816	2816/817	2817/818	2818/819	2819/820	2820/821	2821/822	2822/823	2823/824	2824/825	2825/826	2826/827	2827/828	2828/829	2829/830	2830/831	2831/832	2832/833	2833/834	2834/835	2835/836	2836/837	2837/838	2838/839	2839/840	2840/841	2841/842	2842/843	2843/844	2844/845	2845/846	2846/847	2847/848	2848/849	2849/850	2850/851	2851/852	2852/853	2853/854	2854/855	2855/856	2856/857	2857/858	2858/859	2859/860	2860/861	2861/862	2862/863	2863/864	2864/865	2865/866	2866/867	2867/868	2868/869	2869/870	2870/871	2871/872	2872/873	2873/874	2874/875	2875/876	2876/877	2877/878	2878/879	2879/880	2880/881	2881/882	2882/883	2883/884	2884/885	2885/886	2886/887	2887/888	2888/889	2889/890	2890/891	2891/892	2892/893	2893/894	2894/895	2895/896	2896/897	2897/898	2898/899	2899/900	2900/901	2901/902	2902/903	2903/904	2904/905	2905/906	2906/907	2907/908	2908/909	2909/910	2910/911	2911/912	2912/913	2913/914	2914/915	2915/916	2916/917	2917/918	2918/919	2919/920	2920/921	2921/922	2922/923	2923/924	2924/925	2925/926	2926/927	2927/928	2928/929	2929/930	2930/931	2931/932	2932/933	2933/934	2934/935	2935/936	2936/937	2937/938	2938/939	2939/940	2940/941	2941/942	2942/943	2943/944	2944/945	2945/946	2946/947	2947/948	2948/949	2949/950	2950/951	2951/952	2952/953	2
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**EGSI Comparative Cost Estimate**  
**Schedule 1: Summary of Total Transition Costs**

Line	Description	Factors	Reference	Subtotal	Transition Estimate	EGSI Cost	% Variance
1							
2	Internal Resource Costs						0%
3	Labor & Benefits		Workpaper W2	\$ 35,065,854	24,859,375		
4	Training, Travel & Other Employee Expenses		Workpaper W2		1,599,000		
5	Utilities, Maintenance & Building Facilities		Workpaper W3		5,200,542		
6	Other		Workpaper W5		3,406,938		
7							
8	External Resource Costs						0%
9	Consulting for Implementation		Workpaper W1	\$ 67,456,500	67,456,500		
10							
11							
12	Systems Costs						0%
13	Acquisition						
14	Customer Care System (CCS)		Workpaper W4	\$ 21,777,331	9,664,200		
15	Competitive Retailer Information System		Workpaper W4		214,500		
16	Load Profiling and Data Aggregation		Workpaper W4		2,210,700		
17	Data Exchange		Workpaper W4		5,776,710		
18	Load Forecasting		Workpaper W4		330,100		
19	Counterparty Trading System		Workpaper W4		1,040,000		
20	Other		Workpaper W4		2,541,121		
21	Maintenance	%_om_rate	#_yrs_transition	\$ 29,573,737			0%
22	Customer Care System (CCS)		Workpaper W4		6,442,800		
23	Competitive Retailer Information System		Workpaper W4		338,000		
24	Load Profiling and Data Aggregation		Workpaper W4		6,442,800		
25	Data Exchange		Workpaper W4		12,436,840		
26	Load Forecasting		Workpaper W4		920,400		
27	Counterparty Trading System		Workpaper W4		960,000		
28	Other		Workpaper W4		2,032,897		
29							
30	Contingency	10%		\$ 15,387,342	15,387,342.18		
31							
32	<b>Total Transition Costs</b>			<b>\$ 169,260,764</b>	<b>\$ 144,300,000</b>		<b>-17%</b>

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**EGSI Comparative Cost Estimate**  
**Workpaper 1: External Resource Consulting and Development**

[illegible]

EGSI Comparative Cost Estimate  
Worksheet 1: External Resource Cataloging and Development

Item	Project	Resource	Rate	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
1	Business Community	Corporate																			
2	Business Community	Corporate																			
3	Business Community	Corporate																			
4	Business Community	Corporate																			
5	Business Community	Corporate																			
6	Business Community	Corporate																			
7	Business Community	Corporate																			
8	Business Community	Corporate																			
9	Business Community	Corporate																			
10	Business Community	Corporate																			
11	Business Community	Corporate																			
12	Business Community	Corporate																			
13	Business Community	Corporate																			
14	Business Community	Corporate																			
15	Business Community	Corporate																			
16	Business Community	Corporate																			
17	Business Community	Corporate																			
18	Business Community	Corporate																			
19	Business Community	Corporate																			
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46	Business Community	Corporate																			
47	Business Community	Corporate																			
48	Business Community	Corporate																			



EGSI Comparative Cost Estimate  
Worksheet 2: Internal Resource Loading Detail by Role

Factors Reference:											
% annual salary escalation		2.5%									
\$ _expenses_per_fte		\$ 5,000									
\$ _other_expenses_per_fte		\$ 500									
\$ _supplies_per_fte		\$ 1,000									
Line	Project	Division	Department	Role	PTE Salary ID	# of FTE	# Months	Base Year Salary	Start Date	Stop Date	Loaded Salary
1	Business Continuity	Corporate	Communications	Training Developer	5	1	12	75,000 2001Q1	2001Q1	2001Q4	\$ 92,750
2	Business Continuity	Corporate	Communications	Financial Reporting	5	0.25	48	50,000 2001Q1	2001Q1	2001Q4	\$ 62,500
3	Business Continuity	Corporate	Communications	Assistant	5	1	30	75,000 1999Q4	2002Q1	2002Q1	\$ 93,750
4	Business Continuity	Corporate	Communications	Chief Information Officer	Exec2	0.5	24	22,500 2001Q1	2002Q4	2002Q4	\$ 281,250
5	Business Continuity	Corporate	Communications	Chief Operating Officer	Exec2	0.25	66	22,500 1999Q1	2002Q4	2002Q4	\$ 281,250
6	Business Continuity	Corporate	Communications	Financial Systems Manager	2	1	24	40,000 2000Q1	2001Q4	2001Q4	\$ 50,000
7	Business Continuity	Corporate	Communications	Data Management	5	1	24	75,000 2000Q1	2001Q4	2001Q4	\$ 92,750
8	Business Continuity	Corporate	Communications	Database Administrator	5	1	33	30,000 2000Q1	2001Q4	2001Q4	\$ 32,500
9	Business Continuity	Corporate	Communications	Infrastructure Manager	5	1	24	60,000 2000Q1	2001Q4	2001Q4	\$ 75,000
10	Business Continuity	Corporate	Communications	Infrastructure Support	5	0.25	45	60,000 2000Q1	2001Q4	2001Q4	\$ 75,000
11	Business Continuity	Corporate	Communications	Web Services Manager	5	0.25	24	60,000 2000Q1	2001Q4	2001Q4	\$ 75,000
12	Business Continuity	Corporate	Communications	Technical Architect	5	0.25	24	60,000 2000Q1	2001Q4	2001Q4	\$ 75,000
13	Business Continuity	Corporate	Communications	IT	5	1	15	60,000 2001Q1	2002Q1	2002Q1	\$ 75,000
14	Business Continuity	Corporate	Communications	DBA Support	5	1	27	75,000 1999Q3	2001Q1	2001Q1	\$ 92,750
15	Business Continuity	Corporate	Communications	Windows Administrator	5	1	54	75,000 1999Q3	2002Q4	2002Q4	\$ 92,750
16	Business Continuity	Corporate	Communications	Windows Admin Support	5	0.25	42	50,000 1999Q3	2002Q4	2002Q4	\$ 62,500
17	Business Continuity	Corporate	Communications	Network Administrator	5	0	0	50,000 1999Q3	2002Q4	2002Q4	\$ 62,500
18	Business Continuity	Corporate	Communications	Network Admin Support	5	0	0	50,000 1999Q3	2002Q4	2002Q4	\$ 62,500
19	Business Continuity	Corporate	Communications	UNIX Administrator	5	0	0	50,000 1999Q3	2002Q4	2002Q4	\$ 62,500
20	Business Continuity	Corporate	Communications	Enterprise Administrator	5	0	0	50,000 1999Q3	2002Q4	2002Q4	\$ 62,500
21	Business Continuity	Corporate	Communications	RAID Support	5	1	12	50,000 2001Q1	2001Q4	2001Q4	\$ 62,500
22	Business Continuity	Corporate	Communications	Process Analyst	5	1	30	60,000 1999Q3	2001Q4	2001Q4	\$ 75,000
23	Business Continuity	Corporate	Communications	Process Analyst	5	1	27	60,000 2001Q1	2001Q4	2001Q4	\$ 75,000
24	Business Continuity	Corporate	Communications	Process Analyst	5	1	6	60,000 2001Q1	2001Q2	2001Q2	\$ 75,000
25	Business Continuity	Corporate	Communications	Desktop Specialist	5	1	6	60,000 2001Q1	2001Q4	2001Q4	\$ 75,000
26	Business Continuity	Corporate	Communications	Manager	5	0	0	60,000 2001Q1	2001Q4	2001Q4	\$ 75,000
27	Business Continuity	Corporate	Communications	Business Manager	5	2	54	60,000 1999Q3	2001Q4	2001Q4	\$ 75,000
28	Business Continuity	Corporate	Communications	Data Analyst	5	0.25	66	120,000 1999Q3	2001Q4	2001Q4	\$ 150,000
29	Business Continuity	Corporate	Communications	System Architect	5	2	27	50,000 1999Q3	2001Q4	2001Q4	\$ 62,500
30	Business Continuity	Corporate	Communications	Business Lead	5	2	24	85,000 1999Q3	2001Q4	2001Q4	\$ 106,250
31	Business Continuity	Corporate	Communications	Business Lead	5	1	21	60,000 2001Q1	2002Q1	2002Q1	\$ 75,000
32	Business Continuity	Corporate	Communications	Business Lead	5	1	21	100,000 2001Q1	2002Q1	2002Q1	\$ 125,000
33	Business Continuity	Corporate	Communications	System Architect	5	1	27	75,000 2001Q1	2001Q4	2001Q4	\$ 92,750
34	Business Continuity	Corporate	Communications	Forecasting Analyst	5	1	21	75,000 2001Q1	2002Q1	2002Q1	\$ 92,750
35	Business Continuity	Corporate	Communications	Paralegal/Analyst	5	1	18	60,000 1999Q4	2001Q1	2001Q1	\$ 75,000
36	Business Continuity	Corporate	Communications	Market Liaison	5	0.25	51	120,000 1999Q3	2001Q1	2001Q1	\$ 150,000
37	Business Continuity	Corporate	Communications	Market Rule Manager	5	1	36	85,000 1999Q3	2001Q1	2001Q1	\$ 106,250
38	Business Continuity	Corporate	Communications	Market Rule Manager	5	0.25	6	60,000 2001Q1	2002Q1	2002Q1	\$ 75,000
39	Business Continuity	Corporate	Communications	Market Rule Manager	5	1	15	100,000 2001Q1	2002Q1	2002Q1	\$ 125,000
40	Business Continuity	Corporate	Communications	Employment & Scheduling Specialist	5	0.5	33	60,000 1999Q3	2002Q1	2002Q1	\$ 75,000
41	Business Continuity	Corporate	Communications	Billing Analyst	5	1	18	75,000 2001Q1	2002Q1	2002Q1	\$ 92,750
42	Business Continuity	Corporate	Communications	Transaction Manager	5	1	18	75,000 2001Q1	2002Q1	2002Q1	\$ 92,750
43	Business Continuity	Corporate	Communications	Transaction Manager	5	1	24	60,000 1999Q3	2001Q1	2001Q1	\$ 75,000
44	Business Continuity	Corporate	Communications	Master Data Analyst	5	0.5	12	30,000 2002Q1	2002Q1	2002Q1	\$ 37,500
45	Business Continuity	Corporate	Communications	Business Lead	5	1	30	60,000 2001Q1	2001Q4	2001Q4	\$ 75,000
46	Business Continuity	Corporate	Communications	Business Lead	5	3	24	75,000 1999Q3	2001Q1	2001Q1	\$ 92,750
47	Business Continuity	Corporate	Communications	Data Analyst	5	3	3	75,000 2001Q1	2001Q1	2001Q1	\$ 92,750
48	Business Continuity	Corporate	Communications	Business Lead	5	1	18	60,000 2001Q1	2002Q4	2002Q4	\$ 75,000
49	Business Continuity	Corporate	Communications	Settlements Batch Execution	5	1	30	75,000 2001Q1	2002Q4	2002Q4	\$ 92,750
50	Business Continuity	Corporate	Communications	Settlements Analyst	5	1	15	50,000 2001Q1	2002Q1	2002Q1	\$ 62,500
51	Business Continuity	Corporate	Communications	Settlements Analyst	5	1	18	60,000 2000Q1	2001Q1	2001Q1	\$ 75,000

EGSI Comparative Cost Estimate  
Worksheet 2: Internal Resource Loading Detail by Role

Exhibit Reference:  
% annual\_salary\_escaltion 2.5%  
\$\_expenses\_per\_fic \$ 5,000  
\$ \_other\_expenses\_per\_fic \$ 500  
\$ \_supplies\_per\_fic \$ 1,000

Line	Project	Department	Role	FTE Salary ID	# of FTE	# Months	Base Year Salary	Start Date	Stop Date	Loaded Salary
50	Transition Planning	Transition Planning	TX SET Lead	4	1	60	60000 1999Q3	2004Q3	2004Q3	\$ 75,000
51	Pilot Operations	Information Services	CIS Manager	4	2	30	60000 2001Q3	2001Q3	2001Q3	\$ 75,000
52	Pilot Readiness	Information Services	CIS Analyst	4	4	18	60000 2000Q1	2000Q1	2001Q2	\$ 75,000
53	Pilot Readiness	Information Services	CIS Analyst	4	4	18	60000 2000Q1	2000Q1	2001Q2	\$ 75,000
54	Pilot Operations	Information Services	Market Systems Manager	3	1	18	50000 2000Q1	2000Q1	2001Q2	\$ 62,500
55	Pilot Operations	Information Services	Market Systems Manager	3	1	18	50000 2000Q1	2000Q1	2001Q2	\$ 62,500
56	Pilot Readiness	Information Services	Market Systems Analyst	3	0	0	50000 2001Q3	2002Q4	2002Q4	\$ 62,500
57	Pilot Readiness	Information Services	Settlement System Support	4	1	18	60000 2000Q1	2001Q2	2001Q2	\$ 75,000
58	Pilot Readiness	Information Services	Settlement System Support	4	1	18	60000 2000Q1	2001Q2	2001Q2	\$ 75,000
59	Pilot Operations	Information Services	Data Services Manager	3	1	24	60000 2001Q3	2001Q2	2001Q2	\$ 75,000
60	Pilot Operations	Information Services	Data Services Manager	3	1	24	60000 2001Q3	2001Q2	2001Q2	\$ 75,000
61	Pilot Operations	Information Services	Data Services Support	2	0	0	60000 2001Q3	2001Q4	2001Q4	\$ 62,500
62	Transition Planning	General	Help Desk Support	7	1	30	100000 1999Q1	2001Q2	2001Q2	\$ 125,000
63	Pilot Readiness	Customer Care	Enrollment & Switching Specialist	6	0.5	30	85000 2001Q3	2001Q4	2001Q4	\$ 106,250
64	Pilot Readiness	Customer Care	Transaction Manager	5	0.5	30	60000 2001Q3	2001Q4	2001Q4	\$ 75,000
65	Pilot Readiness	Customer Care	Transaction Manager	5	0.5	30	60000 2001Q3	2001Q4	2001Q4	\$ 75,000
66	Pilot Readiness	Customer Care	Registration Specialist	4	1	12	60000 2001Q1	2001Q4	2001Q4	\$ 75,000
67	Pilot Readiness	Customer Care	Business Lead	3	0	0	50000 2001Q1	2001Q4	2001Q4	\$ 62,500
68	Pilot Readiness	Customer Care	TX SET Analyst	4	1	24	75000 2001Q2	2001Q4	2001Q4	\$ 93,750
69	Pilot Readiness	Customer Care	Customer Care	4	0.25	24	60000 1999Q3	2001Q2	2001Q2	\$ 75,000
70	Project Management	Finance	Procurement & Payroll	3	1	24	50000 1999Q3	2001Q2	2001Q2	\$ 62,500
71	Project Management	Finance	AR Analyst	5	2	54	75000 1999Q3	2003Q4	2003Q4	\$ 93,750
72	Project Management	Finance	AP Analyst	8	1	54	120000 1999Q3	2003Q4	2003Q4	\$ 150,000
73	Project Management	Finance	Budget Analyst	8	0.25	57	120000 1999Q3	2003Q4	2003Q4	\$ 150,000
74	Project Management	General	Project Lead	5	2	30	75000 1999Q3	2001Q4	2001Q4	\$ 93,750
75	Project Management	General	Contract Administrator	5	1	54	75000 1999Q3	2001Q4	2001Q4	\$ 93,750
76	Project Management	General	PMO Analyst	4	1	30	60000 1999Q3	2001Q4	2001Q4	\$ 75,000
77	Project Management	General	Functional Architect	6	1	30	85000 1999Q3	2001Q4	2001Q4	\$ 106,250
78	Project Management	General	Chief Financial Officer	6	0.25	24	225000 1999Q3	2001Q4	2001Q4	\$ 281,250
79	Project Management	IT	Testing Analyst	4	8	27	60000 1999Q3	2001Q2	2001Q2	\$ 75,000
80	Project Management	IT	Testing Lead	6	2	27	85000 1999Q3	2001Q2	2001Q2	\$ 106,250
81	Project Management	Legal	Functional Architect	4	1	24	60000 1999Q3	2001Q2	2001Q2	\$ 75,000
82	Regulatory Affairs	Legal	Legal Secretary/Asst	5	1	36	75000 1999Q3	2001Q4	2001Q4	\$ 93,750
83	Regulatory Affairs	Legal	Training Coordinator	4	0.25	30	60000 2001Q1	2001Q4	2001Q4	\$ 75,000
84	Regulatory Affairs	Legal	Internal Communications	4	1	30	60000 1999Q3	2001Q4	2001Q4	\$ 75,000
85	Regulatory Affairs	Legal	Subsidiary Services Manager	4	1	30	60000 1999Q3	2001Q4	2001Q4	\$ 75,000
86	Regulatory Affairs	Legal	Senior Corporate Counsel	3	1	21	50000 2000Q1	2001Q3	2001Q3	\$ 62,500
87	Regulatory Affairs	Legal	Regulatory Counsel	5	1	63	75000 2001Q1	2004Q3	2004Q3	\$ 93,750
88	Regulatory Affairs	Legal	Market Rules Manager	5	1	33	75000 2002Q1	2004Q3	2004Q3	\$ 93,750
89	Regulatory Affairs	Legal	Market Reports	4	0.5	30	60000 1999Q3	2001Q4	2001Q4	\$ 75,000
90	Regulatory Affairs	Legal	Regulatory Counsel	7	0.5	36	100000 2001Q2	2001Q4	2001Q4	\$ 125,000
91	Regulatory Affairs	Legal	Web Content Management	4	1	48	40000 2000Q1	2001Q2	2001Q2	\$ 50,000
92	Regulatory Affairs	Legal	External Communications	4	1	15	60000 2001Q2	2002Q2	2002Q2	\$ 75,000
93	Regulatory Affairs	Legal	General Counsel	6	0.15	18	85000 2001Q1	2002Q2	2002Q2	\$ 106,250
94	Regulatory Affairs	Legal	General Counsel	4	0.25	63	60000 2001Q1	2004Q3	2004Q3	\$ 75,000
95	Regulatory Affairs	Legal	Communications Manager	1	0.25	12	30000 2001Q1	2001Q4	2001Q4	\$ 37,500
96	Regulatory Affairs	Legal	President	1	0.25	63	350000 1999Q3	2004Q3	2004Q3	\$ 437,500
97	Regulatory Affairs	Legal	Chief Strategy Officer	1	1	45	350000 2001Q1	2004Q3	2004Q3	\$ 437,500
98	Regulatory Affairs	Legal	Executive Assistant	8	1	24	120000 2002Q3	2004Q2	2004Q2	\$ 150,000
99	Regulatory Affairs	Legal	Functional Architect	3	0.25	63	100000 1999Q3	2004Q3	2004Q3	\$ 125,000
100			Grand Total							

**EGSI Comparative Cost Estimate  
Worksheet 2: Internal Resource Loading**

[illegible]

EGSI Comparative Cost Estimate  
Worksheet 2: Internal Resource Loading Detail by Role

Factors Reference:		1997Q1												1997Q2												1997Q3												1997Q4												1998Q1												1998Q2												1998Q3												1998Q4												1999Q1												1999Q2												1999Q3												1999Q4												2000Q1												2000Q2												2000Q3												2000Q4												2001Q1												2001Q2												2001Q3												2001Q4												2002Q1												2002Q2												2002Q3												2002Q4												2003Q1												2003Q2												2003Q3												2003Q4												2004Q1												2004Q2												2004Q3												2004Q4												2005Q1												2005Q2												2005Q3												2005Q4												2006Q1												2006Q2												2006Q3												2006Q4												2007Q1												2007Q2												2007Q3												2007Q4												2008Q1												2008Q2												2008Q3												2008Q4												2009Q1												2009Q2												2009Q3												2009Q4												2010Q1												2010Q2												2010Q3												2010Q4												2011Q1												2011Q2												2011Q3												2011Q4												2012Q1												2012Q2												2012Q3												2012Q4												2013Q1												2013Q2												2013Q3												2013Q4												2014Q1												2014Q2												2014Q3												2014Q4												2015Q1												2015Q2												2015Q3												2015Q4												2016Q1												2016Q2												2016Q3												2016Q4												2017Q1												2017Q2												2017Q3												2017Q4												2018Q1												2018Q2												2018Q3												2018Q4												2019Q1												2019Q2												2019Q3												2019Q4												2020Q1												2020Q2												2020Q3												2020Q4												2021Q1												2021Q2												2021Q3												2021Q4												2022Q1												2022Q2												2022Q3												2022Q4												2023Q1												2023Q2												2023Q3												2023Q4												2024Q1												2024Q2												2024Q3												2024Q4												2025Q1												2025Q2												2025Q3												2025Q4												2026Q1												2026Q2												2026Q3												2026Q4												2027Q1												2027Q2												2027Q3												2027Q4												2028Q1												2028Q2												2028Q3												2028Q4												2029Q1												2029Q2												2029Q3												2029Q4												2030Q1												2030Q2												2030Q3												2030Q4												2031Q1												2031Q2												2031Q3												2031Q4												2032Q1												2032Q2												2032Q3												2032Q4												2033Q1												2033Q2												2033Q3												2033Q4												2034Q1												2034Q2												2034Q3												2034Q4												2035Q1												2035Q2												2035Q3												2035Q4												2036Q1												2036Q2												2036Q3												2036Q4												2037Q1												2037Q2												2037Q3												2037Q4												2038Q1												2038Q2												2038Q3												2038Q4												2039Q1												2039Q2												2039Q3												2039Q4												2040Q1												2040Q2												2040Q3												2040Q4												2041Q1												2041Q2												2041Q3												2041Q4												2042Q1												2042Q2												2042Q3												2042Q4												2043Q1												2043Q2												2043Q3												2043Q4												2044Q1												2044Q2												2044Q3												2044Q4												2045Q1												2045Q2												2045Q3												2045Q4												2046Q1												2046Q2												2046Q3												2046Q4												2047Q1												2047Q2												2047Q3												2047Q4												2048Q1												2048Q2												2048Q3												2048Q4												2049Q1												2049Q2												2049Q3												2049Q4												2050Q1												2050Q2												2050Q3												2050Q4												2051Q1												2051Q2												2051Q3												2051Q4												2052Q1												2052Q2												2052Q3												2052Q4												2053Q1												2053Q2												2053Q3												2053Q4												2054Q1												2054Q2												2054Q3												2054Q4												2055Q1												2055Q2												2055Q3												2055Q4												2056Q1												2056Q2												2056Q3												2056Q4												2057Q1												2057Q2												2057Q3												2057Q4												2058Q1												2058Q2												2058Q3												2058Q4												2059Q1												2059Q2												2059Q3												2059Q4												2060Q1												2060Q2												2060Q3												2060Q4												2061Q1												2061Q2												2061Q3												2061Q4												2062Q1												2062Q2												2062Q3												2062Q4												2063Q1												2063Q2												2063Q3												2063Q4												2064Q1												2064Q2												2064Q3												2064Q4												2065Q1												2065Q2												2065Q3												2065Q4												2066Q1												20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### EGSI Comparative Cost Estimate

FACILITY REVENUE:											
% annual salary escalation											
\$ expenses per ft											
\$ other expenses per ft											
\$ supplies per ft											
Line	Project	2	2	3	3	3	3	4	4	5	6
	Division	2007Q1	2007Q2	2007Q3	2007Q4	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	2009Q2
1	Business Continuity	24,609									
2	Business Continuity	24,609	4,192	4,199	4,199	4,199	4,297	4,297	4,297	4,395	4,395
3	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
4	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
5	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
6	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
7	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
8	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
9	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
10	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
11	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
12	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
13	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
14	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
15	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
16	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
17	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
18	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
19	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
20	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
21	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
22	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
23	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
24	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
25	General	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
26	Transition Planning	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
27	Market Mechanics	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
28	Market Mechanics	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
29	Market Mechanics	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
30	Market Mechanics	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
31	Market Mechanics	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
32	Market Mechanics	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
33	Market Mechanics	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
34	Market Rules	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
35	Market Rules	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
36	Market Rules	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
37	Market Rules	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
38	Market Rules	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
39	Market Rules	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
40	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
41	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
42	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
43	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
44	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
45	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
46	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
47	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
48	Business Continuity	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793
49	Pilot Operations	24,609	24,609	25,195	37,793	37,793	37,793	37,793	37,793	37,793	37,793

EGSI Comparative Cost Estimate  
Worksheet 2: Internal Resource Loading Detail by Role

Facilities Reference:													
%_annual_salary_escalation													
\$_expenses_per_ft													
\$_other_expenses_per_ft													
\$_supplies_per_ft													

**EGSI Comparative Cost Estimate**  
**Worksheet 2: Internal Resource Loading Detail by Role**

**Factors Reference:**

% annual salary escalation	2.5%
\$_expenses_per_fte	\$ 5,000
\$_other_expenses_per_fte	\$ 500
\$_supplies_per_fte	\$ 1,000

Line	Project	Divisions	6	2005Q3
1	Business Continuity	Corporate	-	-
2	Business Continuity	Corporate	-	-
3	Business Continuity	Corporate	-	-
4	Business Continuity	Corporate	-	-
5	Business Continuity	Executive Organization	-	-
6	Business Continuity	Information Services	20,215	-
7	Business Continuity	Information Services	-	-
8	Business Continuity	Information Services	-	-
9	Business Continuity	Information Services	-	-
10	Business Continuity	Information Services	-	-
11	Business Continuity	Information Services	-	-
12	Business Continuity	Information Services	-	-
13	Business Continuity	Information Services	-	-
14	Business Continuity	Information Services	-	-
15	Business Continuity	Information Services	-	-
16	Business Continuity	Information Services	-	-
17	Business Continuity	Information Services	-	-
18	Business Continuity	Information Services	-	-
19	Business Continuity	Information Services	-	-
20	Business Continuity	Information Services	-	-
21	Business Continuity	Information Services	-	-
22	Business Continuity	Information Services	-	-
23	Pilot Operations	Information Services	-	-
24	Pilot Operations	Information Services	-	-
25	General	Information Services	-	-
26	Transition Planning	Information Services	-	-
27	Market Mechanics	Information Services	-	-
28	Market Mechanics	Information Services	-	-
29	Market Mechanics	Information Services	-	-
30	Market Mechanics	Information Services	-	-
31	Market Mechanics	Information Services	-	-
32	Market Mechanics	Information Services	-	-
33	Market Mechanics	Information Services	-	-
34	Market Rules	Information Services	-	-
35	Market Rules	Information Services	-	-
36	Market Rules	Information Services	-	-
37	Market Rules	Information Services	-	-
38	Market Rules	Information Services	-	-
39	Market Rules	Information Services	-	-
40	Pilot Operations	Information Services	-	-
41	Pilot Operations	Information Services	-	-
42	Pilot Operations	Information Services	-	-
43	Pilot Operations	Information Services	-	-
44	Pilot Operations	Information Services	-	-
45	Pilot Operations	Information Services	-	-
46	Pilot Operations	Information Services	-	-
47	Pilot Operations	Information Services	-	-
48	Business Continuity	Information Services	-	-
49	Pilot Operations	Information Services	-	-
		Corporate	10,781	-

**EGSI Comparative Cost Estimate**  
**Worksheet 2: Internal Resource Loading Detail by Role**

Factors Reference:			
% annual salary escalation		2.5%	
\$_expenses_per_fte	\$	5,000	
\$_other_expenses_per_fte	\$	500	
\$_supplies_per_fte	\$	1,000	
Line	Project	Division	6
50	Transition Planning	Distribution Services	206602
51	Pilot Operations	Information Services	-
52	Pilot Readiness	Information Services	-
53	Pilot Readiness	Information Services	-
54	Pilot Operations	Information Services	-
55	Pilot Readiness	Information Services	-
56	Pilot Operations	Information Services	-
57	Pilot Operations	Information Services	-
58	Pilot Readiness	Information Services	-
59	Pilot Operations	Information Services	-
60	Pilot Operations	Retail Services	-
61	Pilot Operations	Retail Services	-
62	Transition Planning	Retail Services	-
63	Pilot Readiness	Distribution Services	-
64	Pilot Readiness	Distribution Services	-
65	Pilot Readiness	Distribution Services	-
66	Pilot Readiness	Distribution Services	-
67	Pilot Readiness	Retail Services	-
68	Pilot Readiness	Retail Services	-
69	Project Management	Corporate	-
70	Project Management	Corporate	-
71	Project Management	Corporate	-
72	Project Management	Corporate	-
73	Project Management	Corporate	-
74	Project Management	Corporate	-
75	Project Management	Corporate	-
76	Project Management	Corporate	-
77	Project Management	Distribution Services	-
78	Project Management	Executive Organization	-
79	Project Management	Information Services	-
80	Project Management	Information Services	-
81	Project Management	Retail Services	-
82	Regulatory Affairs	Corporate	-
83	Regulatory Affairs	Corporate	-
84	Regulatory Affairs	Corporate	-
85	Regulatory Affairs	Corporate	-
86	Regulatory Affairs	Corporate	-
87	Regulatory Affairs	Corporate	-
88	Regulatory Affairs	Corporate	-
89	Regulatory Affairs	Distribution Services	-
90	Regulatory Affairs	Retail Services	-
91	Regulatory Affairs	Retail Services	-
92	Transition Planning	Corporate	-
93	Transition Planning	Corporate	-
94	Transition Planning	Corporate	-
95	Transition Planning	Corporate	-
96	Transition Planning	Executive Organization	-
97	Transition Planning	Executive Organization	-
98	Transition Planning	Executive Organization	-
99	Transition Planning	Transition Services	-
100			38,096



**EGSI Comparative Cost Estimate  
Worksheet 3: Facilities Summary**

Line	Description	Factors									
		FTE Per Year:		FTE Count		Quarter Ending:					
		126	147	104	68	36	1	36	Q4	Q3	Transition Estimate
		Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	Q4	2004
		1999	2000	2001	2002	2003	2004	2004	2004	2004	2004
1	Facilities										
2	Primary Facility										
3	Lease	\$ 383,040	447,640	314,640	206,720	108,680	2,280				1,463,000
4	Administration furnishings	\$ 100,800	117,800	82,800	54,400	28,600	600				385,000
5	Utilities	\$ 191,268	223,526	157,113	103,224	54,269	1,139				730,538
6	Data Service (non-WAN)	\$ 245,287	286,655	201,486	132,377	69,595	1,460				936,859
7	WAN Cost										
8	Police Service	\$ 63,000	73,625	51,750	34,000	17,875	375				240,625
9	Building Services	\$ 378,202	441,986	310,666	204,109	107,307	2,251				1,444,520
10	Non-Lense Subtotal	\$ 978,556	1,143,591	803,814	528,110	277,646	5,835				3,737,542
11											
12	Totals	\$ 1,361,596	\$ 1,591,231	\$ 1,118,454	\$ 734,830	\$ 386,326	\$ 8,105	\$			\$ 5,200,542

EGSI Comparative Cost Estimate  
Worksheet 4: Systems Summary

Line	Description	Factors	Distribution	Retail	Non-Division Specific Services	Total	Benchmark	Market Changes
1	Customer Care System (CCS)							
2	Customer and Industrial Billing		4,417,920	3,895,560	1,656,720	9,969,200		
3	license							
4	annual maintenance and warranty		2,899,260	2,899,260		5,798,520		
5	Contingency CCS		2,301,000	2,301,000		4,602,000		
6	license							
7	annual maintenance and warranty		828,360	598,260		1,426,620		
8	Credit		690,300		1,656,720	2,347,020		
9	license							
10	annual maintenance and warranty		138,060		1,380,600	1,518,660		
11	BID Presentation		230,100	230,100	276,120	736,320		
12	license							
13	annual maintenance and warranty		230,100	230,100		460,200		
14	Accounts Receivables							
15	license							
16	annual maintenance and warranty		230,100	230,100		460,200		
17								
18	Competitive Retailer Information System							
19	Public Web site		214,500			214,500		
20	license							
21	annual maintenance and warranty		49,500			49,500		
22	market change maintenance		30,000			30,000		
23	Secure Portal		15,000			15,000		
24	license and configuration		4,500			4,500		
25	annual maintenance and warranty		165,000			165,000		
26	market change maintenance		100,000			100,000		
27			50,000			50,000		
28	Load Profiling and Data Aggregation		15,000			15,000		
29	Profiling Application		2,210,700			2,210,700		
30	license							
31	annual maintenance and warranty		330,100			330,100		
32	Data Aggregation		100,000			100,000		
33	license		230,100			230,100		
34	annual maintenance and warranty		1,880,600			1,880,600		
35								
36	Data Exchange		1,380,600			1,380,600		
37	Meter Installation							
38	license		1,780,600	2,055,600	1,940,510	5,776,710		
39	annual maintenance and warranty				1,940,510	1,940,510		
40	Customer Enrollment and Switching (Texas SET)				1,917,500	1,917,500		
41	license				23,010	23,010		
42	annual maintenance and warranty		1,780,600	2,055,600		3,836,200		
43	market change maintenance		250,000	500,000		750,000		
44			1,380,600	1,380,600		2,761,200		
45	Load Forecasting		150,000	175,000		325,000		
46	license							
47	annual maintenance and warranty			330,100		330,100		
48				100,000		100,000		
49	Counterparty Trading System			250,100		250,100		
50	Deal Capture, Trade Capture, Risk Management							
51	license			1,040,000		1,040,000		
				800,000		800,000		

EGSI Comparative Cost Estimate  
Worksheet 4: Systems Summary

Line	Description	Factors	Distribution	Retail	Non-Division Specific Services	Total	Benchmark	Market Changes
52	annual maintenance and warranty			240,000		240,000		
53								
54	Telephone Equipment				150,000	150,000		
55	Dedicated telephone circuits and/or switchgear							
56	Voice recording system							
57	Corporate voice system							
58								
59	Enterprise							
60	General Ledger, A.P. A.R. Accounting				125,000	125,000		
61	HR							
62	Legal & Contracts							
63								
64	IT Infrastructure Monitoring		442,172	701,516	359,723	1,923,621		
65								
66	Employee Workstations	# workstations \$ workstation			341,500	341,500		
67	Totals		9,486,092	7,716,786	4,574,453	21,777,331		

**EGSI Comparative Cost Estimate**  
**Workpaper 5: Other Transition Expenses Summary**

Line	Description	Factors	Transition Estimate
1	Non-ERCOT LSE FEE		
2		\$ non-ERCOT_LSE_fee	2,205,125
3		#_ESI_ID	1.15
4		#_yrs_transition	383,500
5	Employee Recruiting and Relocation		5
6		%_transition_recruiting	497,188
7	Meetings, Events, Communication, Publications, Printing and Postage		2%
8		\$_communications	625,000
9		#_yrs_transition	125,000
10	Miscellaneous Items		5
11		\$_miscellaneous	79,625
12		#_yrs_transition	15,925
13			5
14	Total		3,406,938

**EGSI Comparative Cost Estimate  
Reference 1: Benchmark References**

Reference Code	Reference Document	Exhibit
E1	ERCOT 2004 Fee Case ["Schd 1-13 WP 1-18 20-24.xls"]	
TMG1	TMG Consulting: "CIS Pricing Considerations", Greg Galluzi, September 2003	
PLX1	Plexus Research, Inc. "Direct Access Metering & Data Communication Requirements", prepared for NARUC, March 31, 1998	

**EGSI Comparative Cost Estimate  
Reference 2: Chart Supporting Material**

External FTE Resource Loading												
	1999Q1	1999Q2	1999Q3	1999Q4	2000Q1	2000Q2	2000Q3	2000Q4	2001Q1	2001Q2	2001Q3	2001Q4
Business Continuity	0	0	14	15	17	17	17	17	25	25	19	2
General	0	0	0	0	0	0	0	0	0	0	0	0
Market Mechanics	0	0	14	14	14	14	14	14	14	9	9	0
Market Rules	0	0	0	0	0	0	0	0	0	0	0	0
Pilot Operations	0	0	0	0	0	0	0	0	0	0	2	4
Pilot Readiness	0	0	36	36	36	36	36	36	59	59	15	16
Project Management	0	0	3	3	5	5	5	5	5	5	3	3
Regulatory Affairs	0	0	3	3	3	3	3	3	5	5	5	5
Transition Planning	0	0	3	3	3	3	3	3	3	4	4	1

Internal FTE Resource Loading												
	1999Q1	1999Q2	1999Q3	1999Q4	2000Q1	2000Q2	2000Q3	2000Q4	2001Q1	2001Q2	2001Q3	2001Q4
Business Continuity	0	0	5	6	15	15	15	15	20	21	21	20
General	0	0	2	2	2	2	2	2	2	2	2	2
Market Mechanics	0	0	4	5	5	5	5	5	8	8	6	4
Market Rules	0	0	2	2	2	2	2	2	2	2	3	3
Pilot Operations	0	0	0	0	1	1	1	1	1	1	1	20
Pilot Readiness	1	1	8	8	14	14	14	14	16	17	23	2
Project Management	0	0	23	23	23	23	23	23	23	23	22	12
Regulatory Affairs	0	0	4	4	5	5	5	5	6	6	7	6
Transition Planning	0	0	1	3	3	3	3	3	5	6	6	6

Internal and External FTE Resource Loading Summary												
	1999Q1	1999Q2	1999Q3	1999Q4	2000Q1	2000Q2	2000Q3	2000Q4	2001Q1	2001Q2	2001Q3	2001Q4
Business Continuity	0	0	19	21	32	32	32	32	45	46	40	22
General	0	0	2	2	2	2	2	2	2	2	2	2
Market Mechanics	0	0	18	19	19	19	19	19	23	17	15	4
Market Rules	0	0	2	2	2	2	2	2	2	2	5	7
Pilot Operations	0	0	0	0	1	1	1	1	1	1	1	36
Pilot Readiness	1	1	44	44	50	50	50	50	75	76	2	2
Project Management	0	0	26	26	28	28	28	28	28	25	15	15
Regulatory Affairs	0	0	7	7	8	8	8	8	11	12	12	11
Transition Planning	0	0	4	6	6	6	6	6	8	10	10	7

Internal and External FTE Resource Loading Comparison												
	1999Q1	1999Q2	1999Q3	1999Q4	2000Q1	2000Q2	2000Q3	2000Q4	2001Q1	2001Q2	2001Q3	2001Q4
Internal FTEs	1	1	48	52	69	69	69	69	83	85	90	73
External FTEs	0	0	23	74	78	78	78	78	111	105	57	31
Total FTEs	1	1	121	126	147	147	147	147	194	190	147	104
% External FTEs	0	0	1	1	1	1	1	1	1	1	0	0

Internal and External FTE Resource Loading Comparison by Category												
	1999Q1	1999Q2	1999Q3	1999Q4	2000Q1	2000Q2	2000Q3	2000Q4	2001Q1	2001Q2	2001Q3	2001Q4
Business Continuity	22	2	9	4	23	17	23	8	7			
General	26	0	14	4	16	60	5	5	4			
Market Mechanics												
Market Rules												
Pilot Operations												
Pilot Readiness												
Project Management												
Regulatory Affairs												
Transition Planning												

2002Q1	2002Q2	2002Q3	2002Q4	2003Q1	2003Q2	2003Q3	2003Q4	2004Q1	2004Q2	2004Q3	2004Q4	2005Q1	2005Q2
2	2	2	2	1	1	1	1	1	1	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	4	4	2	0	0	0	0	0	0	0	0	0
16	16	16	10	10	7	0	0	0	0	0	0	0	0
0	0	1	1	1	0	0	0	0	0	0	0	0	0
3	3	3	3	3	3	3	1	0	0	0	0	0	0
5	5	5	5	3	3	3	3	3	3	3	1	0	0
1	1	1	1	1	1	1	0	0	0	0	0	0	0

2002Q1	2002Q2	2002Q3	2002Q4	2003Q1	2003Q2	2003Q3	2003Q4	2004Q1	2004Q2	2004Q3	2004Q4	2005Q1	2005Q2
8	6	6	6	5	4	4	4	4	1	1	1	0	0
2	2	2	2	2	2	2	2	2	0	0	0	0	0
4	4	4	4	1	1	0	0	0	0	0	0	0	0
4	4	4	4	1	1	0	0	0	0	0	0	0	0
19	19	19	18	9	8	8	8	8	1	1	1	0	0
1	1	1	1	1	1	1	1	1	0	0	0	0	0
8	8	8	8	8	8	8	8	8	0	0	0	0	0
4	4	4	4	4	4	4	4	4	3	3	3	0	0
5	5	5	5	5	5	5	5	5	5	5	4	0	0

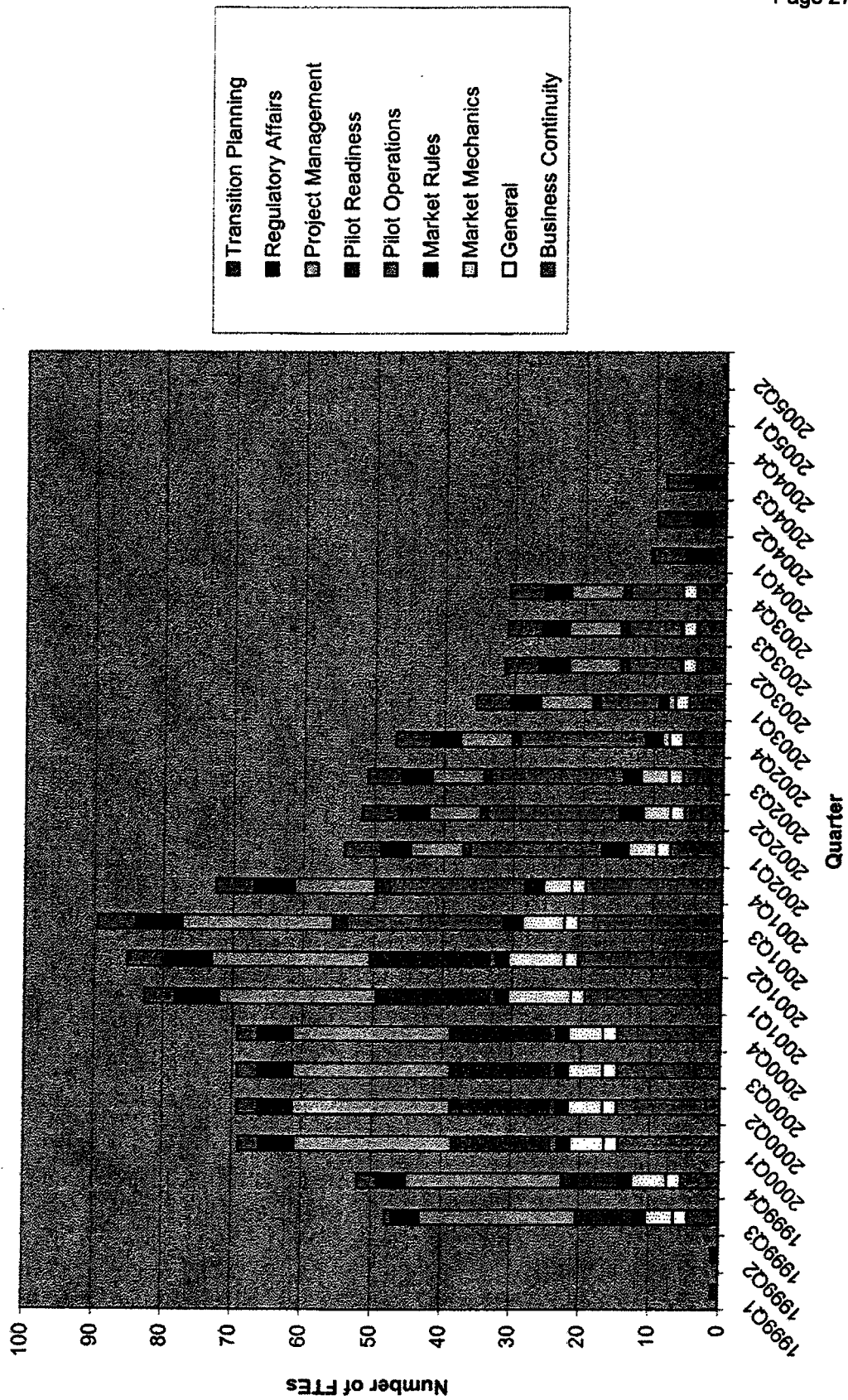
  

2002Q1	2002Q2	2002Q3	2002Q4	2003Q1	2003Q2	2003Q3	2003Q4	2004Q1	2004Q2	2004Q3	2004Q4	2005Q1	2005Q2
10	8	8	7	6	5	5	5	5	2	2	1	1	0
2	2	2	2	2	2	2	2	2	0	0	0	0	0
4	4	4	4	1	1	0	0	0	0	0	0	0	0
8	7	7	5	1	0	0	0	0	0	0	0	0	0
35	35	35	28	19	15	8	8	8	1	1	1	0	0
1	1	2	2	2	1	1	1	1	0	0	0	0	0
11	11	11	11	11	11	11	9	9	0	0	0	0	0
9	9	9	7	7	7	7	7	7	7	6	4	0	0
6	6	6	6	6	6	6	5	5	5	5	4	0	0

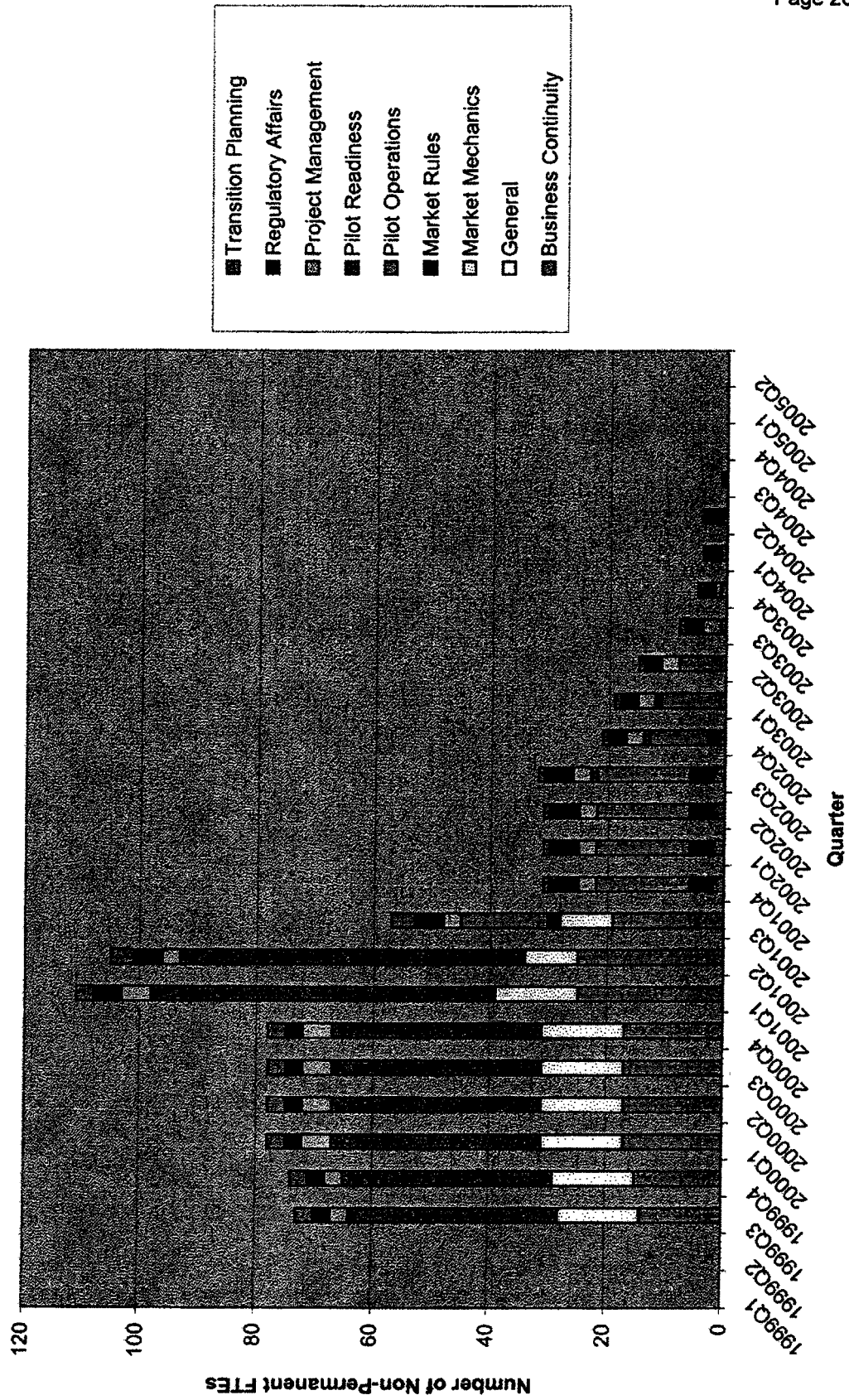
2002Q1	2002Q2	2002Q3	2002Q4	2003Q1	2003Q2	2003Q3	2003Q4	2004Q1	2004Q2	2004Q3	2004Q4	2005Q1	2005Q2
54	52	51	47	36	32	31	31	11	10	9	1	1	1
31	31	32	21	19	15	8	5	4	4	4	1	0	0
85	83	83	68	55	47	39	36	15	14	10	1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0

Reference 3: Internal FTE Resource Loading by Project

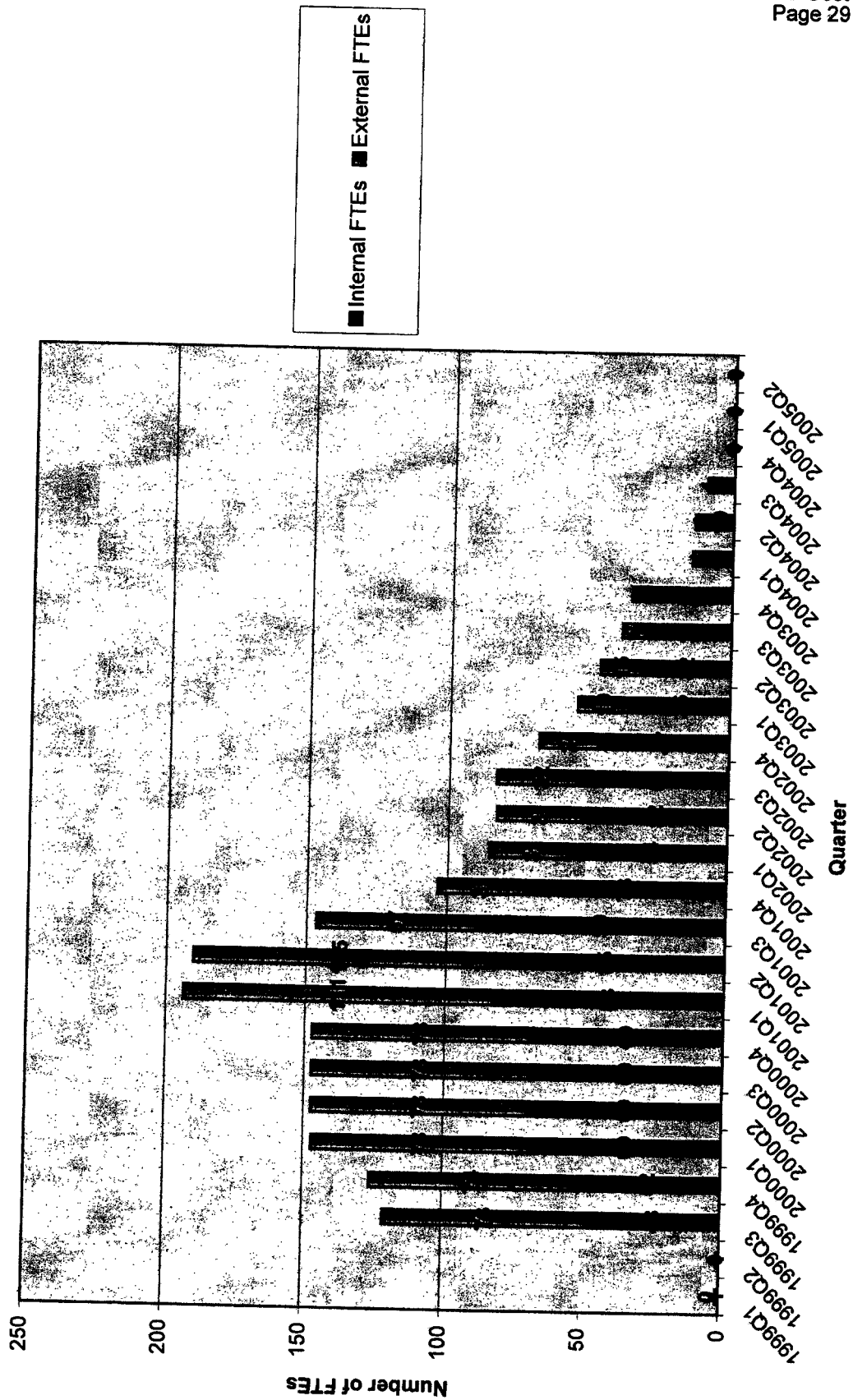




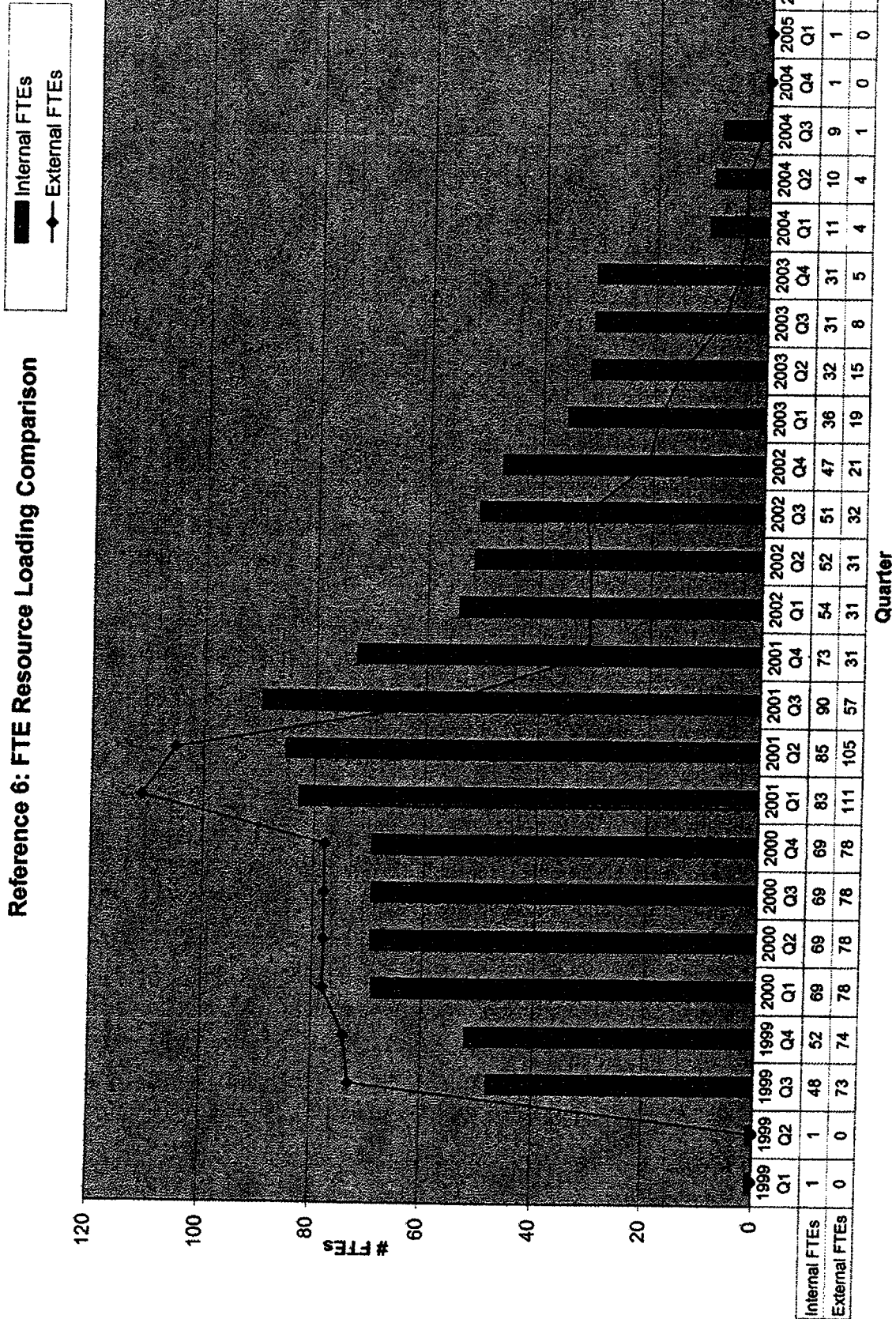
Reference 4: External FTE Resource Loading by Project



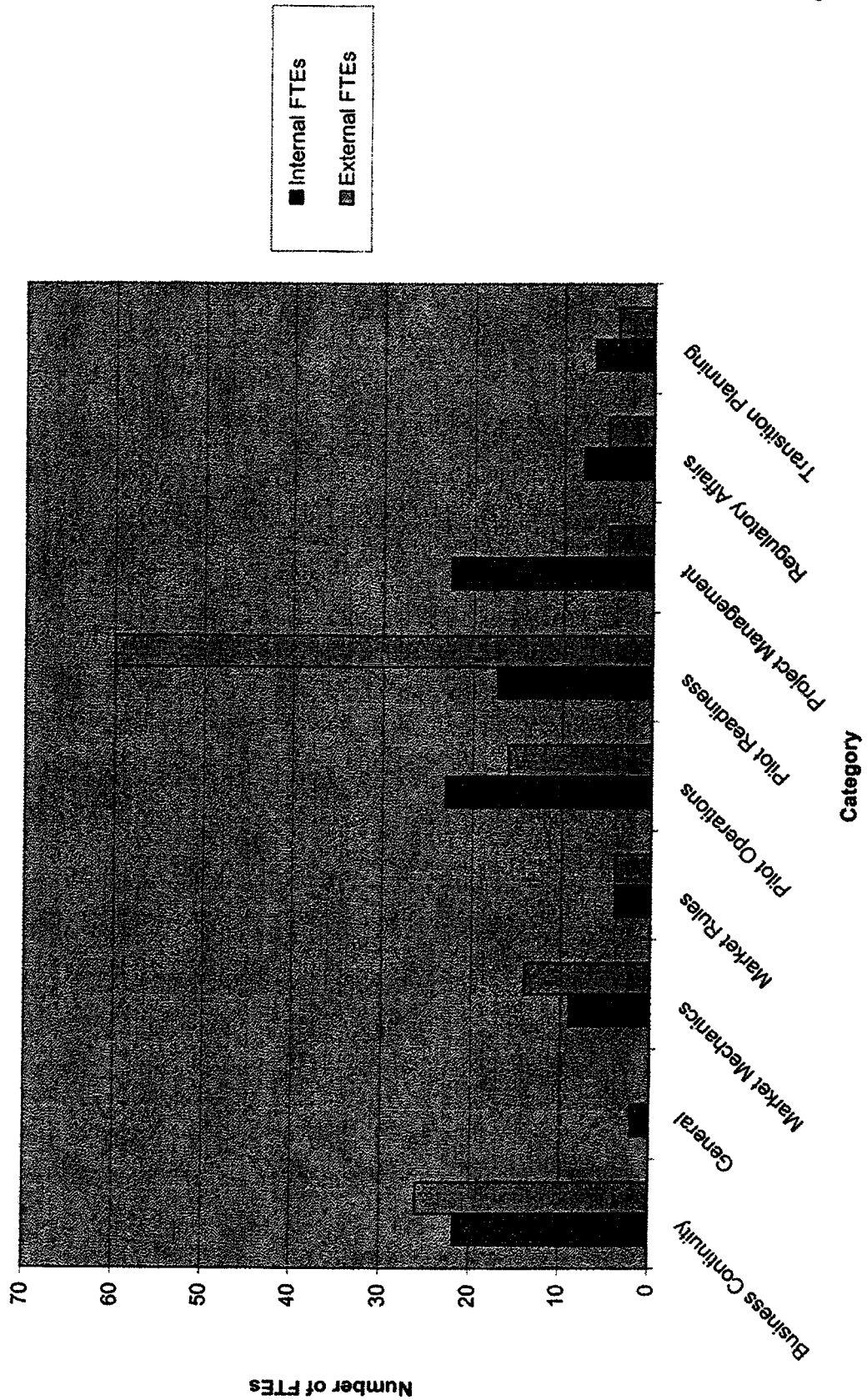
Reference 5: Internal and External FTE Resource Loading by Employee Type



Reference 6: FTE Resource Loading Comparison



Reference 7: Total FTE Resource Count by Project



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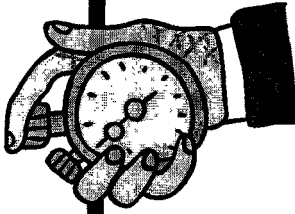
# Systems

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# Timeline of system development

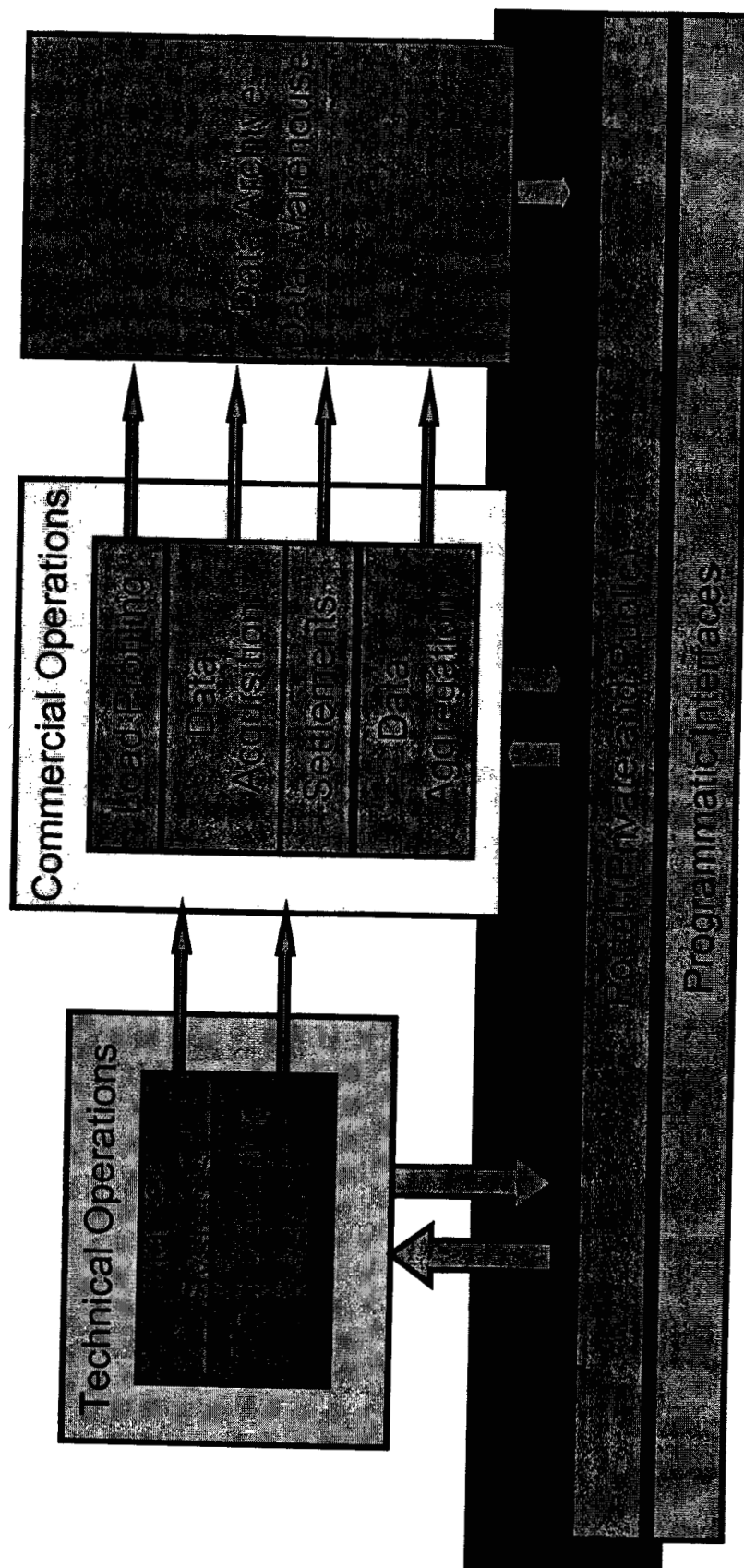
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- SB7 passed in 1999
- During the Fall of 1999, ERCOT developed bid documents to acquire the systems necessary to support the Restructuring of the Texas electric market
- Through a process involving the ERCOT Staff, PUC staff, Market Participants, and a number of vendors, a system was designed to support the implementation of the Protocols which define the Texas market
- Anderson Consulting (now Accenture) was selected as ERCOT's prime vendor for the development of systems needed to support the new Texas electric market
- Systems were designed and built by January 1, 2001 at which time system testing was initiated
- Market Trials began on April 1 2001 and the New Market was initiated on July 31, 2001
- On August 1<sup>st</sup>, 2001 ERCOT became the largest control area in North America



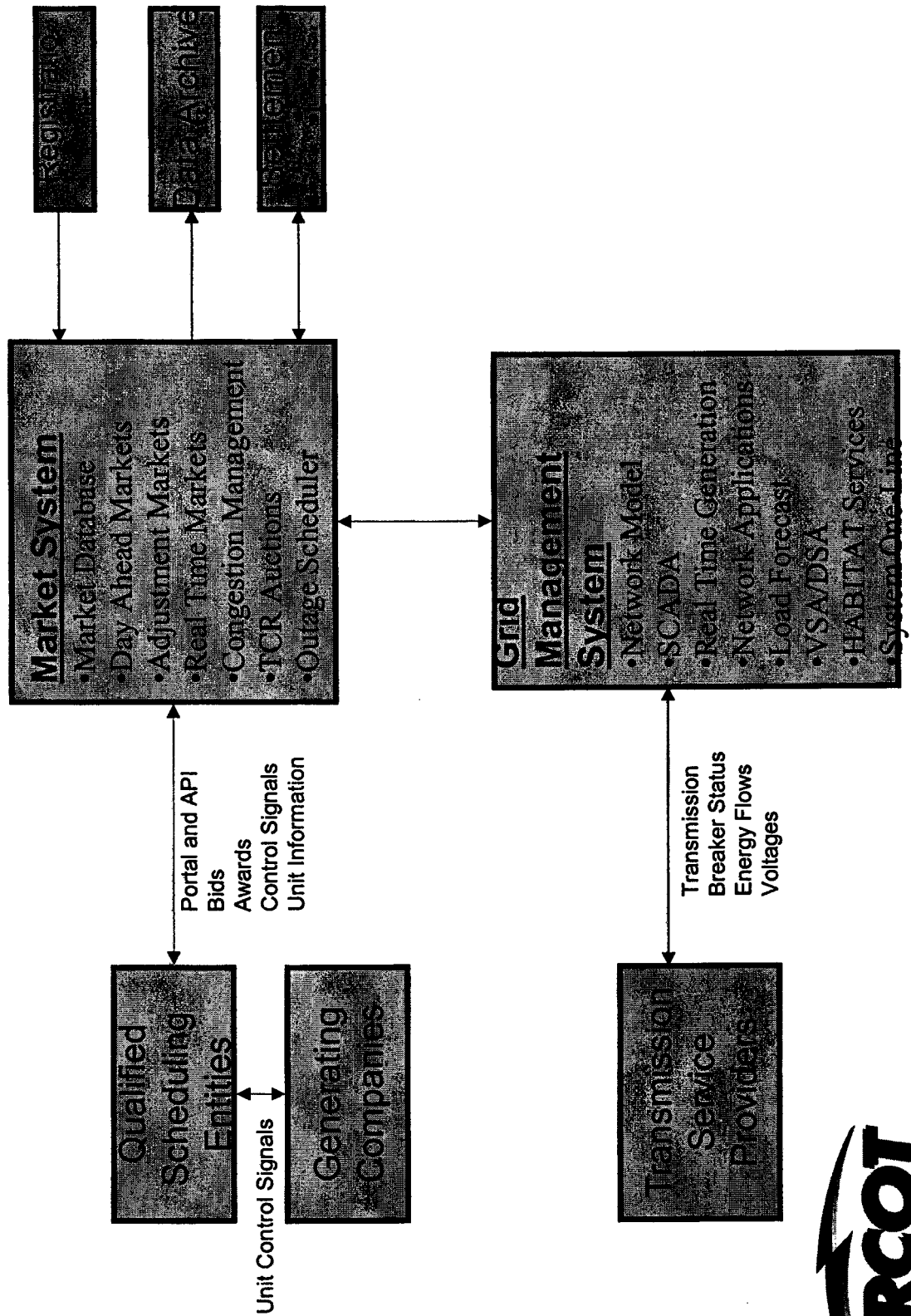
# ERCOT Systems Overview



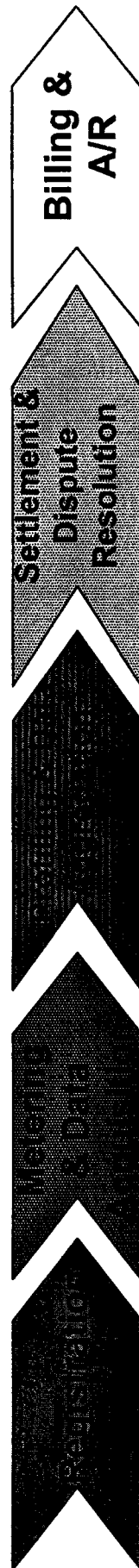
ERCOT Wide Area Network



# Market and Power Systems Overview



# Commercial Systems Overview



- Market Participant registration and maintenance
- Switch oversight
- Customer care services
- Issue resolution
- Reporting

- Metering standards
- Generation metering installation and inspection
- Data acquisition system operation
- Generation metering validation, editing and estimation

- Development and maintenance of profiles
- Application of T&D losses
- Zone aggregation
- UFE determination and allocation

- Daily settlement statement review
- Market reports
- Manual calculations
- Dispute research
- Dispute resolution and implementation

- Invoice preparation and validation
- Invoice transmittal and confirmation
- A/R maintenance