

WP. 18

ENGLISH ONLY

**UNITED NATIONS STATISTICAL
COMMISSION and ECONOMIC COMMISSION
FOR EUROPE
CONFERENCE OF EUROPEAN
STATISTICIANS**

**ORGANISATION FOR ECONOMIC COOPERATION
AND DEVELOPMENT (OECD)
STATISTICS DIRECTORATE**

Joint UNECE/OECD Work Session on Statistical Dissemination and Communication (14-15 February 2005, Henley-on-Thames, United Kingdom)

Topic (ii): Sketching out the future of statistical publications

MOVING AWAY FROM THE BIG PAPER REPORTS: TECHNICAL, EMOTIONAL, AND OTHER INTERESTING CONSEQUENCES

Supporting Paper

Submitted by Energy Information Administration, United States¹

I. INTRODUCTION

1. The mere idea of not producing papers reports is foreign and scary to many who have “always done it that way.” If the information is just on a website, is it a real report? What will the product be or look like if it isn’t a traditional book? Will customers be able to adapt to and be satisfied with the new format? Will employees be confused or resentful that management “took away their report?” Will management miss their glossy handouts?
2. Let’s look at the experience of one small U.S. statistical agency that decided to move away from printed documents. The Energy Information Administration (EIA) is the statistical arm of the U.S. Department of Energy. We collect, analyze and disseminate data, analyses and forecasts on energy supply, demand and prices.
3. EIA’s website was launched in July 1995. At that time the agency produced 101 print titles comprising 322 separate issues. A number of these reports were large (several hundred pages) compendia of information. Total customers for our printed publications never exceeded 20,000 per year.
4. Fairly early on, a few people in EIA recognized the future of the Internet and could see that electronic dissemination of statistical information had the potential to reach many more customers. But we were, as most others at that time were, an organization producing printed

¹ Prepared by Colleen Blessing, U.S. Department of Energy, colleen.blessing@eia.doe.gov

documents with beautifully designed covers, lots of pages, and big paragraphs of descriptive text. Our identity was tied to our publications.

II. Deciding to Move Away From Print

5. So what did we do? Our organization holds Strategic Planning sessions every few years to develop a roadmap for the upcoming years. In 1997, the planners hinted at moving away from print by deciding to “reallocate resources to emerging energy issues and enhance product delivery between 1998 and 2002.” By the year 2000 Strategic Plan, the senior management was more explicit, and after much discussion and some dissent, agreed that over the next 5 years, by 2005, EIA would move to almost totally paperless publishing. Only 4 flagship periodicals were approved to remain in print. These 4 reports were believed to have a constituency who expected paper, and we needed something to send them during the transition period.

6. Did anyone believe this transition could actually be achieved? I know I was skeptical. Strategic plans, for all the good intentions, often become dust collectors sitting on a shelf soon after they are issued. Also, sometimes it’s not clear whether the goals set out in the plans are meant to be general directions to work toward, time and resources permitting (which usually means you have little commitment to actually achieving the end result), or whether they are actual goals you intend to work toward aggressively.

III. Two Different Paths for Change

7. Here’s what happened. More by circumstances than by formal design, EIA took several different paths in moving from printed reports to all-electronic dissemination:

- o Write the report for paper and then duplicate it on the web.
- o Write the report for paper but also develop a tailored web version.
- o Create an entirely new product, specifically for the web.

8. Let’s look at an example of each migration.

9. Perhaps EIA’s most visible and popular product is our *Annual Energy Outlook (AEO)*. In 1995 this report was more than 500 pages long and contained many distinct sections. Its move to an electronic version involved at least two iterations. The first was to simply post the paper document, as written, on the website in PDF format. (See Figure 1: Screen capture of old AEO homepage.)

10. This method was relatively easy for employees to follow because they continued to produce exactly the same product as before, but the end-result was not very useful for customers. Having the paper report allowed users to thumb through the document, peruse the sections, to get a feel for the contents and organization. Not so with the electronic version. Without more user-friendly links and descriptions of the contents, customers couldn’t find what they were looking for. Sometimes they couldn’t even find the report. The all-important forecast tables (which

were in an easy-to-find appendix) were all but unfindable on the web. The top links on the left-side bar, Preface, Overview, Legislation and Regulations, etc. gave no indication of the contents of the report, no summary of the report, no related links.

11. After 4 cycles of duplicating the paper version on the website, EIA decided in 2004 to produce a more web-friendly document, with intuitive links, metadata, and a more descriptive front end. (See Figure 2: Screen capture of the new AEO homepage.) Customers now can easily find the data and forecast tables. The old Preface section at the top of the page, the perfect paper introduction, was replaced with a short summary of the report and helpful related links. Still, the report continues to be written for paper, although the focus has shifted somewhat to the web as positive customer comments provide support. Staff assignments didn't change; the structure of the report didn't change. Only the electronic front-end is new.

12. As a footnote, the *Annual Energy Outlook* is one of the 4 reports still produced in print. But more customers (over 1,000 every day) view the report on the web in a couple days than received it in print in an entire year. The third stage for the AEO would be to produce only a web version and not prepare the paper document at all.

13. This three-staged process (keep paper but focus on the web, then eliminate the paper altogether, then write only a web version) allows for a less abrupt transition. Eliminating the remaining 4 print publications at this point would be infinitely less painful than it would have been 5 years ago. Based on our web customer usage numbers, it might be time to revisit our printing policy once again.

14. A second, more progressive method of moving to electronic dissemination is to create an entirely new product specifically for the web. Consider what you want to present, what stories you want to tell, how customers look for and use different data series together, and then mold a fresh report. Because nothing is fixed at the beginning, authors can "write for the web" and incorporate all kinds of web-friendly features not normally found in paper reports.

15. Take a look at *This Week In Petroleum (TWIP)*. (See Figure 3. Screen capture of TWIP). This all-new report began January 2002 and combines 6 old paper reports (five were eliminated, and one is still released separately). Popular tables are displayed at the top of the page. Snappy explanatory text covering the main points of the data is updated every week. The goal is to explain some current phenomenon in oil markets in a way that most people can understand. Different graphics appear as you move your mouse over the various petroleum products in the TWIP report. Red down-arrows and green up-arrows quickly communicate weekly changes.

16. Some staff worried that it was not possible to create and maintain this new product and that they already had enough to do. They probably didn't think the old reports would really disappear and figured they would have to do twice as much work. Others were resistant to the chatty, casual writing style, which wasn't the formal bureaucratic delivery many of us thought customers expected. Some feared customers would think we weren't taking things seriously enough. However, customer kudos, many to the highest management levels, quickly confirmed that this new product was on target.

17. Staff say they received no customer complaints when the reports were combined and delivered electronically. They made sure that a printable version was just 1 click away. The primary author, also a senior analyst, does admit that sometimes it would be easier to have a print copy when he's called upon to brief a senior official at a moment's notice; even he says occasionally he wants to have the data and charts in hand. But over time, people have gotten used to electronic delivery.

18. *This Week In Petroleum*, a product that didn't exist 3 years ago, has become one of the most popular reports on EIA's website, logging over 70,000 unique users each month. Combining several reports has resulted in a final product more useful than the sum of its parts. Dropping the traditional paper reports doesn't mean you lose those customers. The transition to the web involves the creation new reports for new markets, ones that serve the needs of existing customers but draw in new customers as well.

IV. Emotional Impacts of Eliminating Paper

19. Some people like change; others like tradition. Some people see opportunities; others see the burden of having to do things differently. Some people think about new "markets" for information; others want to protect the classic products and the perceived needs of existing customers.

20. Moving from paper to electronic dissemination is a technical transition, to be sure. But employees who produce the reports often have vested interests and emotional ties to the paper reports. Their work identity is tied to a specific title. Some may wonder if they will still have a job in a paperless environment. Others may wonder what they are actually working on if there never is a finished product they can touch. Some may not want to be retrained to prepare electronic reports. Resistance from the rank and file employees can sabotage or greatly slow the grand plans of management to move forward.

21. In other cases, it might be the managers who are tied to the paper reports. Without the pretty books, what can they wave around at conferences and meetings? The staff may be more web-savvy and anxious to move on to electronic dissemination, but the managers might balk. The bosses might be very comfortable having extra copies in boxes and sending out reports in envelopes.

22. How did EIA employees and managers come to accept the new form of their work and the new end product? What made people come to accept the death of paper?

- Not First but Not Last. They didn't want to be left behind. As others moved to web distribution, the reluctant souls saw that, not only did demand for their information continue, the numbers of customers rose dramatically. Following the change in industry as a whole was difficult to avoid.
- Competition. With agencies looking at web hits and user sessions for various products, authors didn't like having low numbers that tended to make their work look less relevant or less useful.
- Efficiency. We needed to cut costs and the electronic dissemination was a way to be

more efficient, do more with less, and save money in tight budget times. Eliminating printing and mailing costs became an attractive economic option.

- Leadership. Some teams were successful because of strong and supportive leaders. Others heard fiat instructions that gave them no choice. Those who had support felt from the beginning that going electronic was the right thing to do and that their products were still very much valued.
- Customer Acceptance. Many expected more resistance from customers, resistance that didn't come. What did come were new customers. The segment wanting paper has shrunk every year. More people have Internet access. More people understand web navigation. More people expect instant as oppose to snail-mail access.
- Creative Outlet. Some staff embraced the creative outlet offered by moving to the new format, a chance to escape the repetitive survey and data work. Training was viewed as a career enhancer, a new skill.
- No Backfilling. As print people took other jobs or retired, we didn't replace them. This isn't the most proactive way to move away from print, but it works, albeit slowly.

V. When Is It Finished? When Do We Update?

23. In the pre-web days, reports had established preparation and production schedules. The final report wasn't reviewed and cleared until all the pieces were in place. Release dates were held hostage by the weakest (i.e. slowest) links. A single package was shipped to the printer and issued on a specific date. The data were all for 2003 or January, or some other time period. Management had one tidy package with no confusion. Staff understood and were comfortable with this cycle even though timely delivery of information and responsiveness to customers may have suffered.

24. In the web age, many offices are moving away from the hard-copy publication mentality. Now, pieces of information, parts of reports, and certain data series can be posted at different times when they are available and ready. Information can be updated or revised anytime.

25. The experience of ongoing posting can lead to the feeling among the staff that the product is never finished. It also puts a burden on management to do "moving" reviews and approvals rather than the one final review when "everything is ready." With real-time updates, customers are assured the freshest information but comparability might be confusing. As an example, EIA publishes many international energy statistics. Currently we have complete data for 2002, and some data for 2003 and even 2004. So which years should we show for which categories? If we show all 2002 data, the report is consistent but the most recent data aren't distributed. If we show whatever is the latest we have, customers have up-to-date information but they can't compare across countries or calculate consistent totals.

VI. New Information Markets Create New Customer Expectations

26. In the paper world, customers received information in the mail and probably defined information as being late in terms of days or even weeks. With almost immediate access to information in the electronic world, customers now describe being late in terms of minutes or (in EIA's case for some data series), even seconds!

27. With the growth in world energy markets, EIA needed to become more nimble, more relevant, and more timely. The "big books" that used to be appropriate became stodgy. Customers wanted the weekly information to be easily accessible, on the surface.

28. World financial markets have come to depend on EIA's electronic dissemination of certain oil and natural gas data. We release the *Weekly Petroleum Status Report* every Wednesday at 10:30a.m. on the dot and the *Weekly Natural Gas Storage Report* every Thursday at 10:30 a.m. on the dot. Huge amounts of money can move on financial trading and futures markets based on our data (See Figure 4: NYMEX chart).

29. Special systems have been created and are still being refined to best deliver weekly information in a reliable and timely way. We discovered that, close to the 10:30 release time, robots were repeatedly banging on our site, trying to be the first to get the information. On some days, the system became so clogged that other customers didn't receive the information in a timely way (one bitterly complained that the information was 2 minutes late). Such a seemingly small delay has devastating consequences for futures traders who make split-second decisions. In late January EIA will implement a new system called Gateway that will simultaneously hold all customers' browser requests open with a "wait just a minute" message; a countdown clock will then release the data to everyone simultaneously when the clock reaches the release time.

30. The availability of new electronic reports has changed customer expectations for availability and timeliness. Now we are working to understand customer uses of our data and adapt to their access issues. One might argue it is less stressful to put out one big paper report, with more flexible schedules and time for scholarly thought. Going real-time plays to customers' needs for data but can be less intellectual. If you commit to providing certain information electronically, especially if it is time-sensitive, you have to be prepared to deliver it, to have back-up plans, to distribute in paper if necessary, and to test new systems. In December 2004 EIA experienced severe connectivity problems. We could neither receive electronic data submissions nor disseminate data to customers via the Internet. Contingency plans, quickly set up and communicated to customers, involved handing out paper copies of the data in the lobby of our building at 10:30!

31. Before electronic dissemination, no one in EIA could have envisioned this intense demand for our data. Most statistics probably aren't going to move markets like in this example, but if you have numbers that might, be aware of the possible consequences of promising delivery electronically.

VII. Closing

32. The move from paper to electronic dissemination for statistical information is inevitable. The number of customers you can serve on the web is staggering: EIA had 20,000 print customers ten years ago; now we reach 1.5 million unique users each month!

33. The transition might be slow or fast, transitional or abrupt, supported or resisted, agreed to by majority or by fiat. If you are moving away from the “big book”:

- Transition to the web in stages rather than all at once
- Secure staff and management support
- Expect new customer expectations
- Think about update and revision policies.

34. A poetic counterpoint. There are still constituents for paper. I’m one of them, for novels and newspapers. Not for statistics. When asked by the Washington Post “What will be essential in the year 2020?” Walter Isaacson, President of the Aspen Institute said:

35. “Print. If for the past 400 years we’d been getting all of our info electronically, and somebody invented a way to put it on paper and deliver it to our doorsteps so we could read it in the backyard or bath or bus, people would say this new print technology is so wonderful it will replace the Internet.”

36. The Internet is now our doorstep.

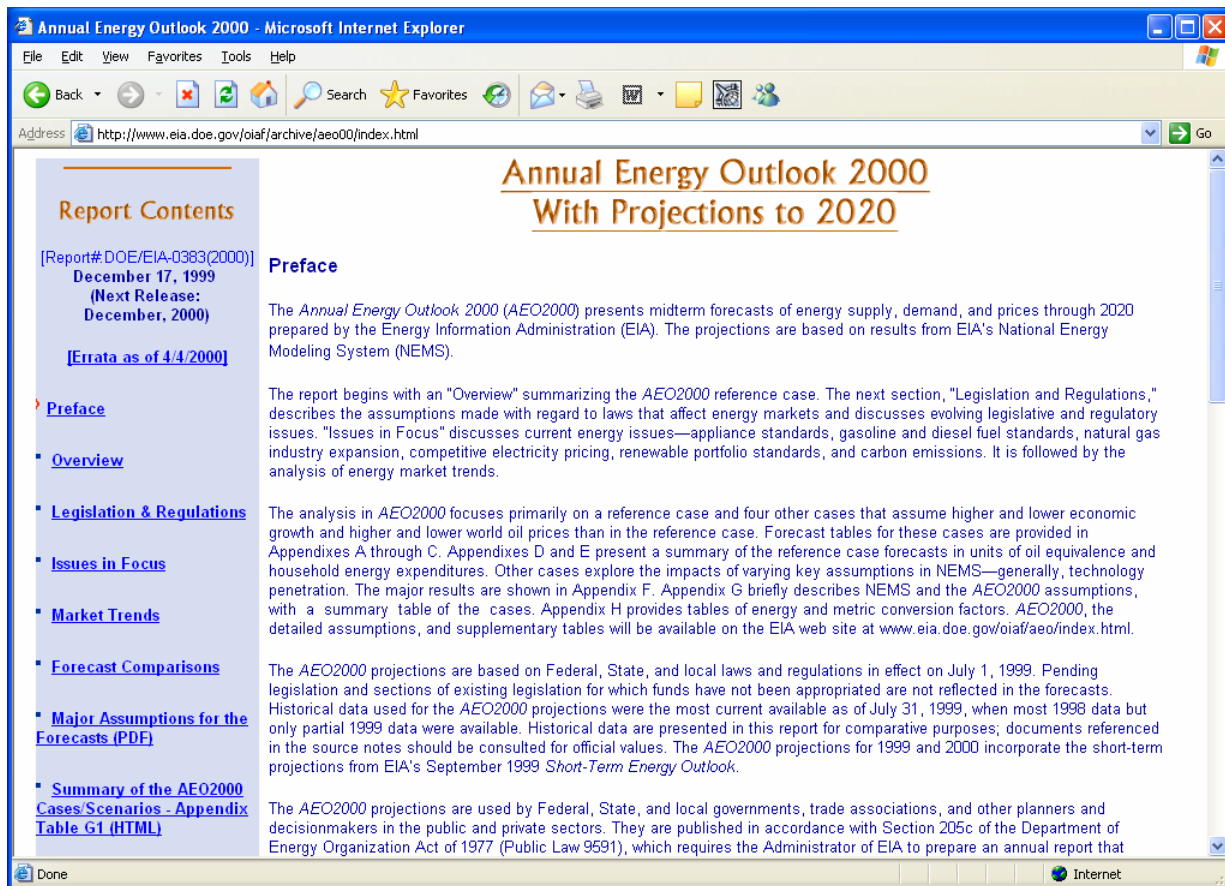


Figure 1. Old Annual Energy Outlook Home Page (not user-friendly)



Figure 2. New Annual Energy Outlook Home Page (more user-friendly)

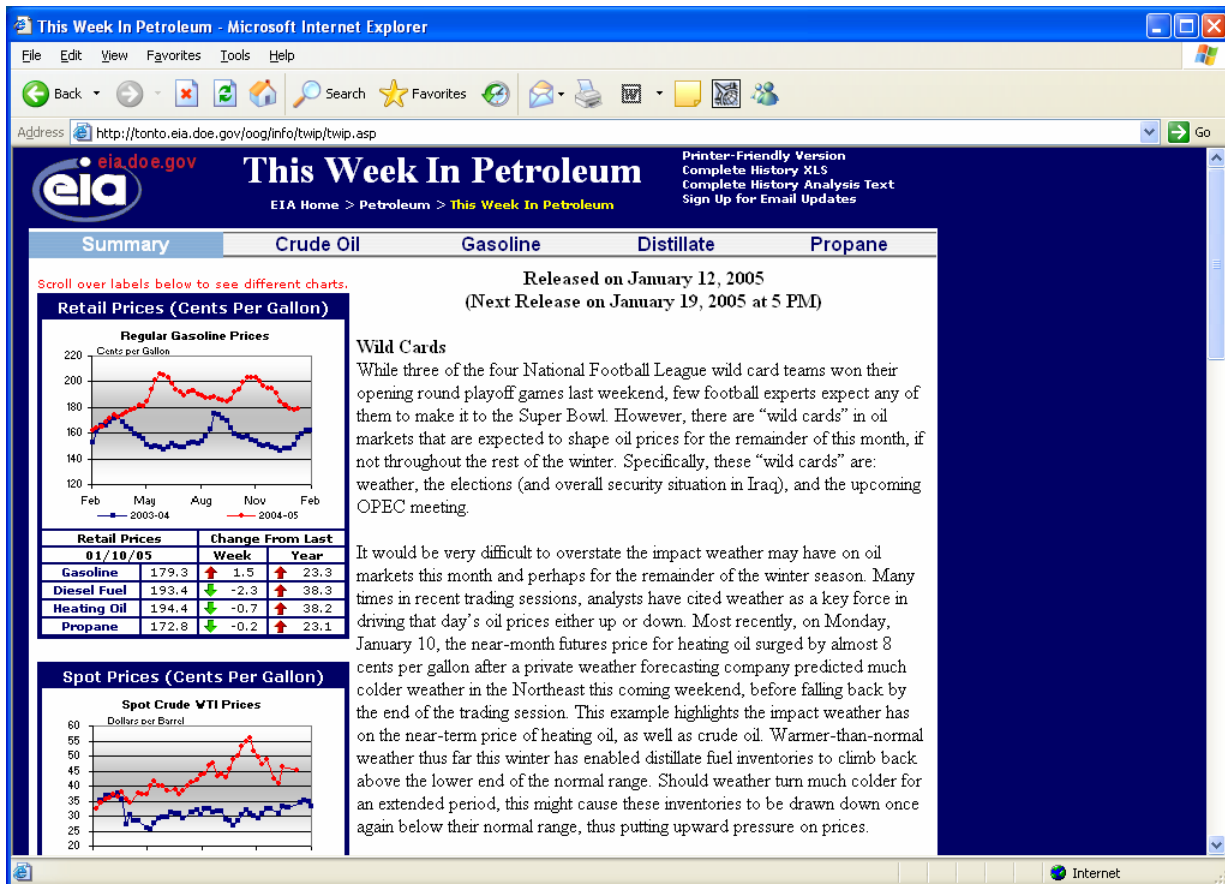


Figure 3. This Week In Petroleum (new web product)

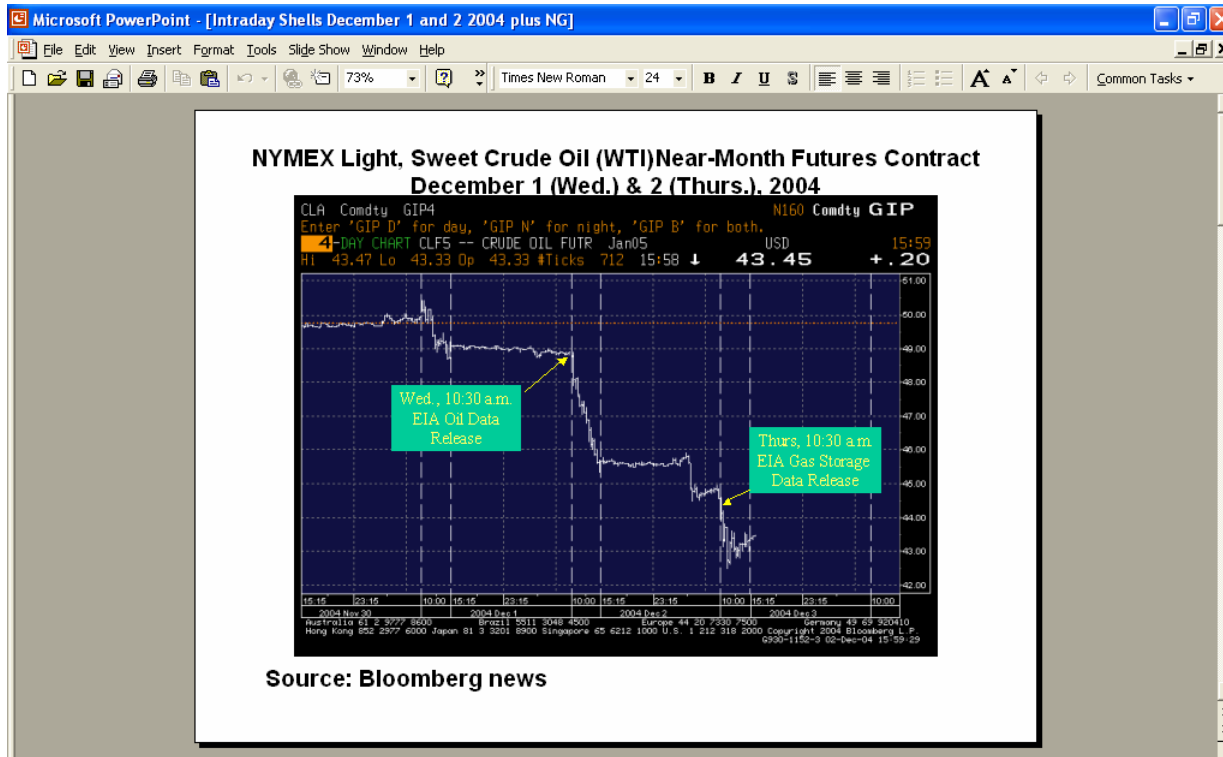


Figure 4. NYMEX Chart (showing effect of EIA data releases)