

Exhibit
Federal Order Hearing, Week of February 26, 2007
Docket No. AO-14-A77, et al.; DA-07-02
NMPF Statement in Support of the Incorporation
Of Energy Cost Indices into Federal Order Make Allowances

Introduction

My name is Dr. Roger Cryan. I am the Vice President for Milk Marketing and Economics for the National Milk Producers Federation (NMPF), where I have been employed for the past six years. Prior to that, I was the economist for the Atlanta Milk Market Administrator. I am a graduate of the Johns Hopkins University and hold an M.A. and a Ph.D. in agricultural economics from the University of Florida. I am a Secretarial appointee to the USDA Advisory Committee on Agricultural Statistics. I have been involved with agriculture and agricultural economics for over twenty-five years.

NMPF is the voice of America's dairy farmers, representing nearly three-quarters of the country's 62,000 commercial dairy farms through their membership in NMPF's 32 member cooperative associations.

NMPF proposes that USDA change the manufacturing cost allowances ("make allowances"), for cheddar cheese, nonfat dry milk, butter, and whey – by incorporating monthly energy cost adjusters. In the Appendix attached to this statement, NMPF offers specific language to effect that change.

Indexing Energy Costs in the Federal Order Make Allowances

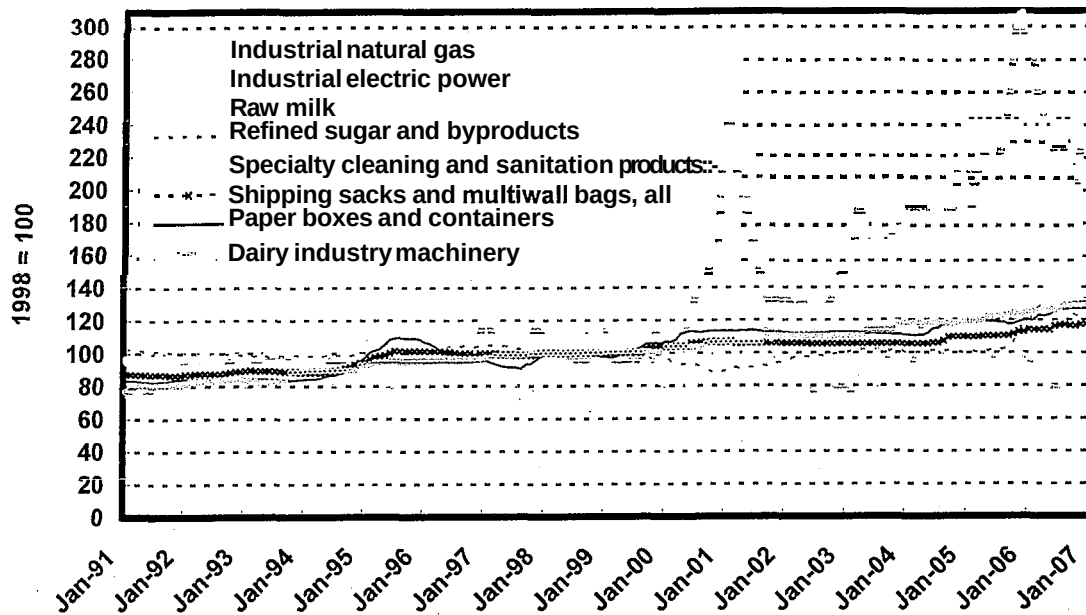
Energy cost is by far the most volatile component of manufacturing costs. Other costs tend to increase more steadily and more gradually over time and are, at least partially, by increased manufacturing productivity.¹ But energy costs are different. Short-term, but often dramatic, energy price increases in recent years have often overshadowed, and at times overwhelmed, other cost and productivity changes.

The current Class III and IV price formulas include fixed make allowances that incorporate an energy cost that was estimated at a single point in time. Given the increasing volatility of energy prices, a fixed energy cost component no longer makes sense. For example, make allowances that were based upon the extraordinarily high energy costs of late 2005 would now be clearly excessive. Since that time, natural gas prices have decreased, regressing toward their long-term norms. On the other hand, the make allowances that were applied in late 2005 were based in part upon 1998 energy costs and failed to reflect the costs of processing certain dairy products. The Producer Price Indices in Figure 1 demonstrate this point.²

¹ See C.J. Morrison Paul, "Modeling and Measuring Productivity in the Agri-Food Sector: Trends, Causes, and Effects" in the *Canadian Journal of Agricultural Economics* (48(2000): 217-240) for an overview of the evidence respecting productivity growth in the food processing industry. See also Mathew Shiané, Terry Roe, and Munisamy Gopinath, *U.S. Agricultural Growth and Productivity: An Economywide Perspective*, Agricultural Economics Report No. 758, USDA/ERS, January 1998.

² The chart shows the following published PPI data series, all adjusted so the annual average for 1998 is equal to 100: WPU016, WPU023103, WPU02320114, WPU023302, WPU023502, WPU0253, WPU0543, WPU0553, WPU06720102, WPU09150218, WPU091503, WPU116101. They may be most easily retrieved from the following Bureau of Labor Statistics web page: <http://data.bls.gov/cgi-bin/srgate>

Figure 1. Producer Price Indexes, Selected Processing Inputs



The use of a fixed point in time estimate of energy costs in calculating make allowances can unfairly disadvantage both dairy processors and dairy producers. When energy prices rise dramatically, fixed make allowances fail to provide adequately for plant costs; when they fall precipitously, they provide an unfair windfall to processors at the expense of producers.

NMPF proposes a change that would be fair to all participants in the dairy industry. NMPF urges USDA to adopt a rule that incorporates a mechanism for monthly adjustments of processors' energy costs. NMPF suggests that the energy costs adjustment mechanism be based on published Producer Price Indices, or their functional equivalent. Such indexing would allow specific and regular adjustments—both up and down—to reflect dairy manufacturing plants true costs of natural gas and electricity. Such a mechanism would be more equitable than the currently employed point-in-time

estimate, and it would contribute to maintaining the viability of processing pooled milk on each market.

NMPF recommends that the energy index adjustments be calculated from the Producer Price Indices for Industrial Natural Gas (BLS Series WPU0553, Base = Dec 1990)³ and Industrial Electric Power Distribution (BLS Series WPU0543, Base = 1982), weighted by the direct costs of electricity and fuels per pound of product, as estimated for 2004 by USDA/RBS and CDFA and for 2005 by Dr. Stephenson.

NMPF does not believe that the long-term problem of energy costs can be addressed simply by making a new point-in-time estimate and maintaining the current method of calculating make allowances. Although a modest one-time adjustment could make the formulas appear more equitable under current conditions, subsequent changes in the energy market could quickly render a new fixed make allowance obsolete even before it is implemented. Any make allowance calculation based on a fixed-point-in-time estimate will unfairly penalize processors when energy prices go above the baseline in the revised survey, and unfairly penalize producers when energy prices go below the baseline. Energy cost indexing make sense and should be added to the formula.

Calculating the Energy Cost Adjustment

Whatever make allowances result from this proceeding, NMPF proposes that they be adjusted each month to account for the rise and fall of energy costs. NMPF recommends that the Electricity and Fuels elements of plant costs be inflated or deflated according to the following formula:

³ Another natural gas PPI, WPU0531, tracks the price of natural gas at the wellhead or, where it is a by-product of other processing, at the processing plants. This has been **confirmed** by personal **communication** with Melissa Wolter of the Bureau of Labor Statistics.

Make adjustment =

$$\begin{aligned} & [(Industrial\ Electricity\ PPI_{current} / Industrial\ Electricity\ PPI_{base}) - 1] * Electricity\ Cost_{base} \\ & + [(Industrial\ Natural\ Gas\ PPI_{current} / Industrial\ Natural\ Gas\ PPI_{base}) - 1] * Fuels\ Cost_{base} \end{aligned}$$

The resulting make allowances would be equal to a base make allowance plus an energy cost adjustment. The energy costs to be inflated should be derived from the energy elements of each cost survey in proportion to their weight in the final calculation of each base make allowance.

The objective of the formula is to adjust the energy components of the cost of processing for each benchmark commodity. Energy is by far the most volatile element of processing cost. Automatic adjustments to energy costs will cause the make allowance to more consistently reflect the costs that it is intended to reflect. The resulting make allowance would be neither too high nor too low, as energy costs swing up and down.

Table 1. Dairy Product Plant Costs, 2004, \$/Lb.
USDA/RBCS

Cost items	Cheese	Butter	Powder	Whey
Electricity	0.0043	0.0091	0.0121	0.0101
Fuels	<u>0.0076</u>	<u>0.0095</u>	<u>0.0382</u>	<u>0.0227</u>
TOTAL	0.0118	0.0186	0.0503	0.0328

Setting the Energy Cost Base

The proposed language attached to this statement is based explicitly upon USDA's economic impact analysis, entered into the record as

CDFA

Cost items	Cheese	Butter	Powder	Whey
Electricity	0.0086	0.0091	0.0170	0.0334
Fuels	<u>0.0078</u>	<u>0.0019</u>	<u>0.0241</u>	<u>0.0226</u>
TOTAL	0.0164	0.0110	0.0411	0.0560

CORNELL

Cost items	Cheese	Butter	Powder	Whey
Electricity	0.0082	0.0038	0.0102	0.0200
Fuels	<u>0.0109</u>	<u>0.0099</u>	<u>0.0237</u>	<u>0.0227</u>
TOTAL	0.0191	0.0137	0.0339	0.0427

Sources: USDAIRBCS; CDFA; Mark Stephenson, Sept. 14, 2006

Exhibit _____. That analysis developed an energy indexing calculation based upon the proposal as "presented by NMPF at the Reconvened Hearing concerning Class III and IV make allowances during the week of September 14, 2006" (Docket No. AO-14-A74), but

using the ultimate weighting of manufacturing cost data sources used in the Tentative Final Decision in that proceeding. The numbers generated by the USDA analysis generally reflect NMPF's present proposal, as applied to the current Federal order make allowances, and given the limitations of the available data, could serve as a basis for implementing NMPF's proposal. USDA's analysis states that, "Data from the Cornell study concerning energy costs per pound have not yet been released to the public." The USDA analysis, therefore, constructs an approximation based primarily on energy costs compiled by the California Department of Food and Agriculture (CDFA). However, at the September 14 hearing, Dr. Mark Stephenson of Cornell University did present survey data regarding manufacturing costs. In his testimony he offered data on total energy costs for each of the four benchmark products, including fuel and electricity costs for each product. Table 1 contains those costs from Dr. Stephenson's testimony, in addition to previously presented data on energy costs from the California Department of Food and Agriculture and USDA's Rural Business-Cooperative Service. All these are from the record of the make allowance proceeding. (Transcript, September 14, 2006, pp. 133-134, and Exhibit 77, p. 4, Docket No. AO-14-A74.) As an economist, I believe this additional data may represent a truer calculation of processors' energy costs. NMPF encourages USDA to consider this data.

If the Secretary decides upon an alternative make allowance, or an alternative method of establishing the make allowance, we urge that a corresponding energy cost indexing methodology be adopted. If this proceeding leads to recalculated make allowances, it should also produce an energy cost index adjustor that corresponds to the data used to produce these make allowances.

The Secretary may decide to administratively update make allowances based upon annual or bi-annual manufacturing cost surveys of manufacturing costs, as has been proposed. If so, such surveys should tabulate electricity and fuel costs, and an energy cost index adjustor should be applied to these costs. Without indexing, even an annual make allowance revision based on annual cost data will result in the application of energy costs up to 24 months old. Given the volatility of energy costs – not just from year to year, but from month to month – a monthly index-based update is the only way to achieve equity in milk pricing.

Use of Industrial Natural Gas and Industrial Electricity PPI's

Producer Price Indices are published by the Bureau of Labor Statistics (BLS) as a measure of changes in the prices of a large number of inputs to production. The prices for some inputs are measured separately for residential customers, commercial customers, and industrial customers. Industrial customers include manufacturing **and** mining. These Indexes are published monthly, in mid-month.

The Producer Price Index for Industrial Natural Gas is designated as BLS Series WPU0553 (December 1990=100). This series tracks the average price of natural gas sold by utilities to industrial customers, defined as manufacturing and mining operations. A note from the economist who works most directly with the Producer Price Index at BLS is attached; the detail of this note clearly distinguishes the Industrial Natural Gas index as the one most directly applicable to **manufacturers** costs of energy.

The Producer Price Index for Industrial Electric Power Distribution is designated as BLS Series WPU0543. Its base period is 1982; that is, the index is set equal to 100 for

the annual average of 1982. This series tracks the average price of electricity sold by utilities to industrial customers, defined as manufacturing and mining operations.

Both of these series can be retrieved from the following page in the website of the Bureau of Labor Statistics using their Series ID numbers:

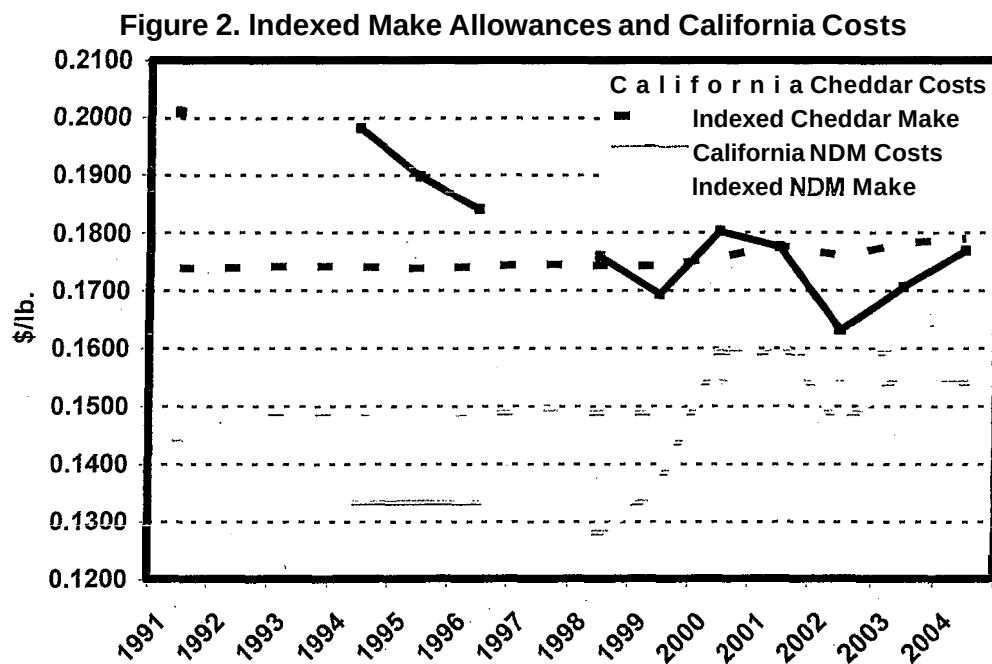
<http://data.bls.gov/cgi-bin/srgate>

Evidence for Applicability of an Energy Cost Adjustors

The only consistent series of manufacturing costs over time is for California. This series provides a means of testing the fit of proposed energy cost adjustments to the make allowance.

The graph below shows the annual California cost survey results for cheddar cheese, and nonfat dry milk, along with make allowances for each adjusted with the electricity and natural gas adjustors proposed by NMPF in January 2006. Although the energy costs don't account for all of the long-term changes in manufacturing costs, they do appear to clearly account for much of the year-to-year variation.

Energy – especially natural gas – costs are a large share of the cost of processing of nonfat dry milk. Cheese costs in California have been trending downward over 15 years. This long-term trend may or may not be representative of the nation at large. Nevertheless, the proposed make allowance adjustment does reflect much of the year-to-year variation in California cheese processing costs. The graph shows how closely an adjusted make allowance fits the changes in California costs for cheese and nonfat dry milk.



The proposed butter cost adjustment also correlates with changing costs in California butter plants, but uniquely among these products, non-energy costs have risen considerably more than energy costs, so that it does not show up easily in a simple graph.

California whey costs were not collected before 2003. For this reason, one is unable to directly test the fit over time of our proposed energy index for whey, as one can for butter, nonfat dry milk, and cheese. However, whey drying is so similar to nonfat dry milk production that one can reasonably assume, as USDA did in order reform and the 2002 decision, that whey processing costs are closely related to nonfat dry milk processing costs. NMPF suggests that the evidence for nonfat dry milk also represents evidence for whey.

Monthly Application of Energy Cost Adjustor

The energy price indexes that NMPF proposes to be used are calculated each month by the Bureau of Labor Statistics. The make allowance should be made as current as possible by monthly updating. This would result in smaller, although more frequent, changes than if adjustments were made quarterly or annually. Just as the milk price formulas are calculated and applied each month as a formula of the dairy product prices, so should an energy cost formula be calculated and applied each month in the revised formulas.

Figure 1 demonstrates quite clearly how variable energy prices are on a month-to-month basis. Federal order make allowances cannot effectively approximate true processing costs unless they are updated as frequently as is practicable.

Compatibility with, and Comparison to, Other Proposals

It is worth noting that NMPF's proposed energy cost adjustment is compatible with any milk price formula that makes use of make allowances. However, the energy cost base must be set to correspond with the costs in the period upon which those make allowances are based.

As such, the various economic analyses of the NMPF proposal, by USDA and by Professor Bailey, don't truly capture the impact of our proposals, except as a simple add-on to another proposal. These analyses considered the NMPF proposal as "Scenario J", and treated it as an isolated change to the current status quo.

Cross-examination of at least one witness in this proceeding suggested that the best way to address volatile processing costs is to establish especially large make allowances in order to cover potential cost increases. NMPF (and that witness) do not agree. As the record demonstrates, aside from milk prices, energy costs are the most volatile faced by dairy product manufacturers and the only costs that tend to both rise and fall. Applying an energy cost adjuster to the make allowance avoids the need to establish an overly generous fixed make allowance to accommodate this volatility. Allowing the make allowance to be adjusted as energy costs fluctuate is the most fair to both dairy processors and milk producers.

As a result, applying NMPF's proposal will tend to reduce the underlying make allowance necessary to accommodate ongoing manufacturing prices. In addition, energy price risk imposes additional costs on processors of benchmark dairy products, and reducing these risks through an energy cost adjuster will have the effect of reducing processing costs.

Over the long-run, then, the NMPF proposal will not have a negative effect on producer revenue, and rather should have a small positive impact.

Conclusion

The manufacturing cost allowances in Federal order milk price formulas should be adjusted on a regular basis to reflect continuing fluctuations in energy costs. The use of an energy price index in the formula is the best and fairest way to deal with this issue. Revised make allowances with energy cost indexing would provide specific relief to

plants squeezed by higher energy costs, then reduce make allowances again when the squeeze is off.

We urge Dairy Programs and the Secretary of Agriculture to consider an energy cost adjuster that incorporates monthly energy cost indexing.

APPENDIX

Language Effecting Energy Price Indexing in Make Allowances

The following language is proposed to effect the revision of the make allowances and indexing of energy costs in the Class III and IV milk and milk component price formulas. No conforming changes would be required outside of this section.

§ 1000.50 **Class** prices, component prices, and advanced pricing factors.

...

(l) Butterfat price. The butterfat price per pound, rounded to the nearest one-hundredth cent, shall be:

(1) The U.S. average NASS AA Butter survey price reported by the Department for the month,

(2) less a manufacturing cost allowance equal to:

(i) 12.02 cents **plus**,

(ii) 0.17 cents times a figure **equal** to the **latest monthly** Producer Price Index for Industrial Natural Gas reported by the Bureau of Labor Statistics minus 213.4 and divided by 213.4, **plus**

(iii) 0.8 cents times a figure **equal** to the **latest monthly** Producer Price Index for Industrial Electricity reported by the Bureau of Labor Statistics minus 150.1 and divided by 150.1;

(3) with the result multiplied by 1.20.

(m) Nonfat solids price. The nonfat solids price per pound, rounded to the nearest one-hundredth cent, shall be

(1) The U.S. average NASS nonfat dry milk survey price reported by the Department for the month,

(2) less a manufacturing cost allowance equal to:

(i) 15.7 cents **plus**,

(ii) 2.39 cents times a figure **equal** to the **latest monthly** Producer Price Index for Industrial Natural Gas reported by the Bureau of Labor Statistics minus 213.4 and divided **by** 213.4, **plus**

(iii) 1.89 cents times a figure **equal** to the **latest monthly** Producer Price Index for Industrial Electricity reported by the Bureau of Labor Statistics minus 150.1 and divided **by** 150.1;

(3) with the result multiplied by .99.

(n) Protein price. The protein price per pound, rounded to the nearest one-hundredth cent, shall be computed as follows:

(1) Compute a weighted average of the amounts described in paragraphs (n)(1)(i) and (ii) of this section:

(i) The U.S. average NASS survey price for 40-lb. block cheese reported by the Department for the month; and

(ii) The U.S. average NASS survey price for 500-pound barrel cheddar cheese (38 percent moisture) reported by the Department for the month plus 3 cents;

(2) From the price computed pursuant to paragraph (n)(1) of this section subtract a manufacturing cost allowance equal to:

(i) 16.82 cents, ~~plus from the price computed pursuant to paragraph (n)(1) of this section and multiply the result by 1.383;~~

(ii) 0.78 cents times a figure equal to the latest monthly Producer Price Index for Industrial Natural Gas reported by the Bureau of Labor Statistics minus 213.4 and divided by 213.4, plus

(iii) 0.82 cents times a figure equal to the latest monthly Producer Price Index for Industrial Electricity reported by the Bureau of Labor Statistics minus 150.1 and divided by 150.1;

(3) ~~Multiply~~ ~~Add to~~ the amount computed pursuant to paragraph (n)(2) of this section by 1.383, then an amount computed as follows:

(i) Subtract the manufacturing cost allowance computed pursuant to paragraph (n) (2) of this section ~~16.82 cents~~ from the price computed pursuant to paragraph (n)(1) of this section and multiply the result by 1.572;

(ii) Subtract 0.9 times the butterfat price computed pursuant to paragraph (l) of this section from the amount computed pursuant to paragraph (n)(3)(i) of this section; and

(iii) Multiply the amount computed pursuant to paragraph (n)(3)(ii) of this section by 1.17.

(o) Other solids price. The other solids price per pound, rounded to the nearest one-hundredth cent, shall be

(1) The U.S. average NASS dry whey survey price reported by the Department for the month,

(2) less a manufacturing cost allowance equal to:

(i) 19.56 cents plus,

(ii) 1.72 cents times a figure equal to the latest monthly Producer Price Index for Industrial Natural Gas reported by the Bureau of Labor Statistics minus 213.4 and divided by 213.4, plus

(iii) 2.46 cents times a figure equal to the latest monthly Producer Price Index for Industrial Electricity reported by the Bureau of Labor Statistics minus 150.1 and divided by 150.1;

(3) with the result multiplied by 1.03.

...

(r) The Secretary of Agriculture may set new **energy** cost base numbers (in place of designate a **substitute** statistical series for the monthly Producer Price Indices for Industrial Natural Gas or Industrial Electricity, as applied above, if the Secretary determines that these series are no **longer** adequate to this purpose,