



# ENERGY NEWS

$$g(\pi) = \log_e(\pi n / (1-\pi)) \quad L(\beta) = \sum_j (y_j \log \pi_j + (n_j - y_j) \log(1-\pi_j))$$

$$g(\pi) = \hat{\phi}^{-1}(\pi) \quad \sum_j (y_j - n_j \pi_j) = 0 + \sum_j x_j (y_j - n_j \pi_j)$$

$$g(\pi) = \log_e(-\log_e(1-\pi)) \quad s_j = \sum (y_i - p(x_i))(1 + \log p(x_i))$$

$$PDF = \frac{1}{x \sqrt{2\pi\sigma^2}} e^{-\frac{(\ln x - \mu)^2}{2\sigma^2}} \quad \mu = e^{\mu + \sigma^2/2}$$

$$\sigma^2 = (\sigma^2 - 1) e^{2\mu + \sigma^2}$$

$$RR_{12} = d_{R_{1T_1}} * CI + d_{R_{2T_2}} * CI + d_{R_{3T_3}} * CI$$

$$RR_{22} = d_{R_{1T_2}} * CI + d_{R_{2T_2}} * CI + d_{R_{3T_3}} * CI$$

$$RR_{\dots} \rightarrow (T+R) * (T+R-1)$$



$$H = \frac{\sigma^2}{A}$$

$$X = e^{\mu + \sigma Z}$$

$$\frac{1}{2} \ln(2\pi e \sigma^2)$$



$$g(\pi) =$$

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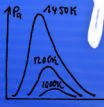
$$g(\pi) =$$

$$sd = \sqrt{\frac{\sum (d_i - \bar{d})^2}{(n-1)}} \quad \bar{d} = \sum d_i / n$$



For me it's personal

$$PMF = \binom{n}{k} p^k (1-p)^{n-k} \quad ent = \frac{1}{2} \log_2(2\pi e n p(1-p)) + O(\frac{1}{n})$$



$$\bar{d} = \sum d_i / n$$



Optimization Function

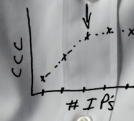
$$\textcircled{1} \min \left[ \sum_{I=1}^n (c_{R1} * p(CI) + c_{R2} * p(CI) * \dots) \right]$$

$$\textcircled{2} \min \left[ \sum_{RR=1}^n d * [ (PF_R)^2 + (CF_R)^2 ] \right]$$

$$\textcircled{3} \min \left[ \sum_{I=1}^n \frac{(T_{R_i} - \bar{T})^2}{\text{count}(R_i) - 1} \right]$$

$$SE_{fit} = \sqrt{\frac{1}{n} \sum_{i=1}^n \frac{(y_i - \hat{y}_i)^2}{\sum_{j=1}^n (y_j - \bar{y})^2}}$$

$$s(\hat{\beta}) = \sqrt{s^2 * (X^T X)^{-1} * X_0}$$



$$Q_k = n(n+2) \sum_{m=1}^k$$

## Change that adds up to faster service

FPL's Matt Barrows is a customer too, so he knows every second counts when your power is out. That's why this self-proclaimed "math geek" is using his love for problem-solving to find a way to get help to your neighborhood faster if the lights go out. His team of efficiency experts used complex mathematics, mixed with our newest technology, to uncover a solution that helps dispatchers get crews to where they're needed in the shortest amount of time. The change is expected to trim precious minutes off of restoration efforts.

"Changing things for the better is what I live for. So, when you start to see the impact your work is going to have, it really feels good," said Barrows, whose work will be put to use throughout the areas we serve beginning this year.

We now have more than 1,600 efficiency experts, just like Barrows, who never stop looking for ways to deliver the best service to you every day. Visit [www.FPL.com/efficiencyexperts](http://www.FPL.com/efficiencyexperts) to learn more about his work and others.

# Retired poles serve in new way



Florida's seniors prove this every day. Just because you're retired, it doesn't mean you still can't do great things. We felt the same way about some power poles that we replaced recently in St. Lucie County with stronger, more storm-resilient ones.

While the retired poles are no longer bringing power to Treasure Coast homes and businesses, they're now making Florida's waters even more enjoyable for divers and anglers. We donated 130 concrete poles, about 2,000 tons worth, to St. Lucie County's artificial reef program last year. They're now resting east of the Fort Pierce Inlet, starting a new life as a home to fish and other marine life.

This is our second donation to this reef program. We replace poles throughout the year as part of our commitment to continually improving service reliability and reducing power interruptions. Learn more about our efforts at [www.FPL.com/reliability](http://www.FPL.com/reliability).

## Use smartphone to report an outage

We want it to be as easy as possible for you to reach us if the power goes out. Now you can report and check the status of an outage from your smartphone. Just visit [www.FPL.com](http://www.FPL.com) from your device to use this and other mobile-friendly services.



## Did you know?

Some businesses offer to send your payment to FPL on your behalf for a fee without being authorized by FPL. Use of these unauthorized payment options may delay your payment posting to your account by up to seven business days. We offer several ways you can quickly pay your bill. Visit [www.FPL.com/authorized](http://www.FPL.com/authorized) to learn more.





## Troubleshooting Tips

Having power problems? Before you call us or an electrician, you may be able to fix it yourself!

### Problem

Power is out in only a portion of your home, or only some appliances are not working. You may have a tripped breaker, which are safety devices that protect your home when short circuits or electrical overloads occur.

### Try this

**Step 1:** Find your breaker. It's typically in the garage, a hallway or outside near your electric meter.

**Step 2:** Open your breaker box and check for "tripped" breaker switches. You'll know a breaker is tripped when the lever is halfway between the "on" and "off" positions.

**Step 3:** Reset the breaker by switching it all the way off, then back on.

**Safety tip:** If the breaker trips again, do not reset it. You may have a serious electrical problem. Contact an electrician.

## Storm charge adjustment

The Florida Public Service Commission approved a routine adjustment of the customer storm charge, a component of your bill that helps recover previous hurricane restoration costs and replenishes the reserve for future storms. Effective March 1, the surcharge on a typical bill increased from 39 cents per 1,000 kWh to \$1.57.

## Ask the Energy Expert



To submit a question on any energy-related topic or to comment on this one, please visit [www.FPL.com/asktheexpert](http://www.FPL.com/asktheexpert).

**Q** I was once told that it takes more energy to turn a light on and off than it does to just leave it on for 10 minutes or so. Is this true?

— Patricia H., Boca Raton

**A** There is a little extra electricity involved in turning a light on due to more power needed during startup. However, the amount used is more like leaving the light on for a couple of seconds of normal light operation. Therefore, we recommend turning off a light whenever it is not needed.

One thing that you may want to consider, though, is the lifespan of the bulb itself. The cost effectiveness of turning off lights depends on the type of bulb. All bulbs have an average operating life, which depending on the bulb type could be affected by how many times they are turned on and off.

Read our Ask the Energy Expert blog at [www.FPL.com/asktheexpert](http://www.FPL.com/asktheexpert) to see how different bulbs compare.



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## Check out our weekly tweet tips

We're always looking for ways to help you save money. Now, we have a new way to share energy-saving ideas and other tips with you. Follow our own Emily Pantelides on Twitter **@insideFPL** for your Tweet Tip of the Day. Armed with a video camera, she'll show you simple ways to save and other things you might not know, like:

- » Ways to avoid washing money down the drain when doing laundry.
- » Why your taste in movies could affect your energy bill.
- » How to avoid falling prey to scammers.

This is also your way to talk to us. Have a question for Emily? Join the conversation on Twitter by using the hashtag **#FPLTweetTip**. You can also see our new tips each week at [www.FPL.com/TweetTip](http://www.FPL.com/TweetTip).



## Spring into savings

A little spring cleaning can help you save money now and in the hot summer months ahead. Just add these energy-saving tips to your to-do list:

- » Vacuum or brush the coils underneath and behind your refrigerator. Dust can easily build up on cooling coils, causing it to run less efficiently.
- » When cleaning your windows, check for air leaks. Caulk, seal and weather strip around all seams, cracks and openings to protect against drafts.
- » When cleaning your yard, check your air conditioner to make sure the coils are clean and clear of plants and leaves.

A few extra steps can go a long way. Get more money-saving spring cleaning tips at [www.FPL.com/cleaningtips](http://www.FPL.com/cleaningtips).

