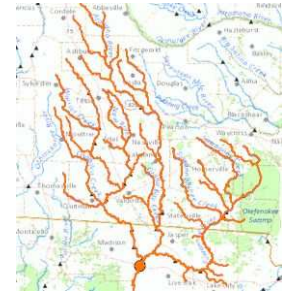




WWALS Watershed Coalition, Inc.
the WATERKEEPER® Alliance Affiliate for the
upper Suwannee, Withlacoochee, and Alapaha Rivers
a 501(c)(3) nonprofit charity
PO Box 88, Hahira, GA 31632
wwalswatershed@gmail.com
www.wwals.net



March 7, 2016

Re: The rest of the story about the proposed Sabal Trail pipeline

Dear Commissioners,

Spectra Energy, FPL, Duke Energy won't tell you many things about their joint pipeline project Sabal Trail Transmission, LLC (STT), such as landowners don't have to take their one-time easement payment offers (STT has routed around many), sinkholes and springs abound much closer to the pipeline path, Spectra's pipeline explosion under the Arkansas River in Little Rock last May, risks to our drinking water in the Floridan Aquifer, and there is no need for this pipeline now that solar power is cheaper, faster, and far cleaner and safer. Plus there are things you can do. Please don't just listen to Sabal Trail. Get the rest of the story, as Paul Harvey used to say.

Please find attached a letter that WWALS board member Chris Mericle recently sent to the Hamilton and Suwannee Boards of County Commissioners. It discusses serious discrepancies between what Spectra Energy and Sabal Trail have been telling local elected officials and staff and what publications by USGS, SRWMD, and independent Practicing Geologists say, as well as what you can see for yourself along the pipeline route.

Here, for example, is a picture of a sinkhole in Suwannee River State park in Hamilton County, with the man in the far background gesturing at a Sabal Trail survey stake less than 60 feet away, on February 18th when Chris Mericle took Suwannee and Hamilton County Commissioners on this hike. We can arrange a similar hike for you, either there, or to one of several other sites in several counties where there are obvious sinkholes near or on the proposed pipeline path.



Sabal Trail may have told you everything is permitted, yet there are several permits still not issued by Georgia and Florida, and the Army Corps of Engineers is still actively considering new information, especially from elected officials, to this address:

Re: Applicant Sabal Trail Transmission, LLC; application number SAJ-2013-03030
Applicant Florida Southeast Connection, LLC; application number SAJ-2013-03099
To: U.S. Army Corps of Engineers
Jacksonville District Regulatory Division
Jacksonville Permits Section
Attn: Mr. Mark R. Evans
Post Office Box 4970
Jacksonville, Florida 32232
(904) 232-2028, Mark.R.Evans@saj02.usace.army.mil

You can also ask the Corps to come with you when you walk the Sabal Trail and see sinkholes they didn't tell the Corps about. Even better: ask Sabal Trail to come along, too, and explain themselves on the spot.

The Federal Energy Regulatory Commission (FERC) says there is a need for this pipeline because Sabal Trail has customers, namely FPL and Duke Energy, which want to build natural gas power plants to "modernize" coal plants. Yet solar power is now less expensive than any other power source, does not require years of permitting process, does not emit any pollutants, and, perhaps most importantly, does not require eminent domain. Why should your citizens have to give up land for profits for FPL, Duke, and Spectra Energy of Houston, Texas?

Please see appended the multiple studies that show how to power each and every U.S. state on sun, wind, and water power and nothing else by 2050, with most of that by 2035. They're cited in the two letters from WWALS to the Suwannee County Commission appended to this packet.

You can write directly to FERC's Commissioners:

*To: Norman C. Bay, Chairman
Tony Clark, Commissioner
Cheryl A. LaFleur, Commissioner
Phillip D. Moeller, Commissioner
Colette D. Honorable, Commissioner
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426
Cc: Ms. Kimberly D. Bose, Secretary*

*Re: Sabal Trail Transmission, LLC,
FERC Docket No. CP15-17-000
Florida Southeast Connection, LLC,
FERC Docket No. CP14-554-000*



Neither Sabal Trail nor FERC will tell you there are four already-authorized Liquid Natural Gas (LNG) export operations where the end of this pipeline chain goes through FPL's Florida Southeast Connection to Martin County. They won't tell you about Kinder Morgan's application to FERC (Docket No. CP15-144) for another natural gas pipeline from Suwannee County to Jacksonville, where Jaxport has been loudly gearing up for LNG export for a couple of years now. They won't tell you that Florida East Coast Railroad already has authorization to pick up LNG from Martin County (Office of Fossil Fuels, U.S. Department of Energy, [Order No. 14-209-LNG, March 18, 2015](#)) and ship it by rail up and down the Florida coast as far as Miami and Jacksonville. Sabal Trail is not just one pipeline: it's a Florida-wide boondoggle.

Sabal Trail may tell you it's a done deal, but it's not. You can also pass a resolution against Sabal Trail. Two counties in Florida (Hamilton and Suwannee) plus the city of Groveland in Lake County have done so, as have five counties and three cities in Georgia (Valdosta, Moultrie, and Albany).

You can even pass a land use ordinance about pipelines, rooted in your comprehensive plan, in the same way that Jefferson County passed an ordinance to prohibit Nestle or any other company from taking local water for bottling from their county.

You can also contact your members of Congress and ask them to do what four Georgia Congressmen have already done: ask the Federal Energy Regulatory Commission (FERC) to fix its broken process or revoke Sabal Trail's certificate. You can ask FERC directly to revoke Sabal Trail's certificate.

If Sabal Trail or FPL asks to talk to you, the Commissioners, especially if they ask to do it one-by-one, here are twenty questions WWALS supplied to Suwannee County Commissioners you might want to adapt:

1. Would these reps be willing to "hike the hike" and see for themselves that active sinkholes are directly on the pipeline crossing path?
2. Please explain the many sinkholes and springs on or much closer to the path of the pipeline than indicated in Sabal Trail Transmission (STT)'s filings with FERC, for example those that Tom Edwards testified to and Sabal Trail's own Gregg Jones corroborated in sworn testimony in WWALS v. Sabal Trail & FDEP. <http://www.wwals.net/issues/stt/>
3. Please provide copies of LiDAR and Ground-Penetrating Radar for the crossings of the Suwannee and Santa Fe Rivers and the Falmouth Cathedral Cave System.
4. Please explain what STT will do if drilling or subsidence causes a leak of groundwater or other substances into the aquifer, especially into the Falmouth Cave System.
5. What happens if there is subsidence under the pipeline under the Suwannee River after construction?
6. What are STT's detailed plans for emergency response in the event of a pipeline/compressor station fire/explosion?
7. What security measures are taken to lessen the chance of terrorist attacks or sabotage to the pipeline or compressor station?
8. How much and which parts of Suwannee and Hamilton Counties are considered low population (or "the middle of nowhere", as Spectra executive Alan Lambert put it) that only the thinnest grade pipeline will be used?
9. How does STT or Spectra vet and train its employees? Licensed, bonded, insured?
10. How many Suwannee County residents will be employed by STT or Spectra?
11. What pipeline and compressor station installation companies or personnel has Spectra or STT hired, and what are their track records (company safety record or employee bios)?
12. Can STT provide details of the compressor station's structure, such as footprint, number of stories? What measures are taken to buffer for visual unsightliness, noise, explosion bunkering?
13. Given that even Judge Canter just ruled against FPL for causing groundwater salinity through an inadequate plan for its Turkey Point power station, what concrete measures will STT or Spectra take to ensure drilling or testing water withdrawals or outputs will not cause adverse salinity or other effects on the rivers or aquifer?
<http://www.mypalmbeachpost.com/news/business/judge-fpls-turkey-point-plants-canals-polluting-bi/nqS6T/>
14. What happens to this pipeline when natural gas is no longer economically feasible. Say, 30 years or so in the future?
15. Who assumes economic responsibility if the flow or water quality of the Suwannee River is profoundly affected? (Note that EPA scientists have stated that it is a risk.)
16. Please explain how merely the ability to complete this pipeline makes it a public good, given that Spectra Energy of Houston, Texas would profit at the expense of numerous local landowners and taxpayers?
17. What financial interest or contractual or other agreements does STT or Spectra or FPL have with Kinder Morgan regarding KMI's Jacksonville Expansion Project, whose FERC filing (Docket No. CP15-144) explicitly says Sabal Trail can connect if it wants to? <http://spectrabusters.org/lng-export/#Florida>
18. What financial interest or contractual or other agreements does STT or Spectra or FPL have with the four or more already-authorized LNG export operations at the end of Florida Southeast Connection or the one pending at the end of the Citrus County lateral?
19. Since Florida already gets 60% of its electrical grid energy from natural gas, why is making the state even more dependent on the same energy source a good idea? <http://spectrabusters.org/allies/#Sierra-Club->
20. Now that Georgia is the fastest-growing U.S. solar power market, and there are more jobs in the solar industry than in oil and gas extraction (see appended letters from WWALS to Suwannee County Commission), why is building any new pipeline a good idea?

You can also write to the EPA, which can still influence what other agencies do, up to and including asking for a revised Environmental Impact Statement from FERC:

*To: Attn: Christopher Militscher
Environmental Protection Agency Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-8960
militscher.chris@epa.gov*

Re: EPA CEQ No. 20150256

These pipelines are all driven by a glut of natural gas from hydraulic fracturing (fracking), according to testimony by one of FERC's own Commissioners, by the head of the Office of Fossil Fuels, and according to numerous industry publications. They have nothing to do with any alleged need by Florida.

The Florida legislature just abandoned a bill that would have promoted fracking in Florida, after massive opposition from counties across the state. Now is a good time to lobby them to do what both South Carolina and Georgia are doing: passing bills to limit eminent domain for pipeline companies.

If these things didn't matter, the pipeline companies wouldn't be lobbying heavily against them.

You are not alone. Many citizens and organizations throughout Florida, Georgia, and beyond are fighting this waste of taxes and ratepayer funds that would go to pipeline companies from Houston, Texas at local expense of eminent domain, property values, environmental destruction, and risks to the tourism industry, local taxes, property, and the water that gives us all life.

For the rivers and the aquifer.

Sincerely,

[/s]

John S. Quarterman, President

Attachments:

- Letter from WWALS Board member Chris Mericle, February 23, 2016
- Geology Report by Dennis Price, P.G., October 25, 2015, available online as: <http://www.wwals.net/?p=18117>
- Aerial Map, Hamilton County, by Sabal Trail, February 27, 2015
- Aerial Map, Suwannee River crossing, by Sabal Trail, February 27, 2015
- Karst Features Table, detail selected by Chris Mericle, by Sabal Trail, September 30, 2015
- North Springshed Analysis, by Cardno for Sabal Trail
- \$38.3 Billion in Consumer Spending on Outdoor Recreation --Florida State Parks
- WWALS to Suwannee BOCC about Sabal Trail, February 2, 2016 <http://www.wwals.net/?p=16232>
- WWALS to Suwannee BOCC about Sabal Trail, January 19, 2016 <http://www.wwals.net/?p=15640>

WWALS Watershed Coalition advocates for conservation and stewardship
of the Withlacoochee, Willacoochee, Alapaha, Little, and Upper Suwannee River watersheds
in south Georgia and north Florida
through awareness, environmental monitoring, and citizen activities



Commissioners,

Suwannee River Crossing Site:

The current proposed route, according to Sabal Trail aerial view Drawing number 1657-PL-FL-DG-72026, crosses the Suwannee River State Park property between MP 266.8 and MP 267.3. Table 6.5-1 identifies 17 "closed topo depressions" between MP 266.8 and MP 267.3, a distance of .5 miles(2,640') and a width of .5 miles(1/4 mile each side of the proposed route). The closest feature to the proposed pipeline route listed in table 6.5-1 is a closed topo depression 750' away from the route centerline.

In the geology report of the Suwannee River crossing site by Professional Geologist Dennis Price figure 2 shows a LiDAR image of approximately 1,000 feet of the proposed pipeline route through the Suwannee River State Park property.

The green dots are GPS located sinkholes, the blue are other non-GPS located sinkholes. Mr. Price describes the LiDAR image as such: "...the entire floodplain area exhibited active sinkhole features too numerous to locate but very evident on the LiDAR map (every blue feature)."

Upon taking a look at figure two I was able to count at least 30 sinkhole features.

Mr. Price's LiDAR image is only a fraction of the proposed route that crosses the Suwannee River State Park property. The two active sinkholes pictured in Mr. Price's report are approximately 50'-60' away from the proposed pipeline route centerline, much closer than The 750' that Sabal says is the closest karst feature to the route.

Why the huge discrepancy between table 6.5-1 and findings in Mr. Price's report?

If the information provided to FERC from Sabal Trail on this small but very critical and sensitive site is wrong, why should we believe that the information Sabal Trail provided anywhere is correct?

Sabal Trail's response to questions about use of LiDAR as an evaluation tool:

"In addition to these detailed complex site-specific investigations, LiDAR data was used to evaluate the entire route through karst areas. The LiDAR is a screening tool that was augmented with geophysical and geotechnical evaluations, as well as field surveys, which provide more detailed site specific data."

Sabal Trail has repeatedly stated that LiDAR was used to evaluate the proposed route.

I have repeatedly asked for the LiDAR images and data to be produced to no avail.

If LiDAR was in fact used to evaluate the Suwannee River crossing Site by Sabal Trail, would not the same data be found by Sabal Trail as was found By Mr. Price?

Also, field surveys (which are more detailed according to Sabal Trail) should have revealed the sinkholes in figure two of Mr. Price's report. Only a small number of depressions were reported by Sabal Trail.

Sabal Trail would have us believe that the Floridan Aquifer does not extend below the river or allow for flow of water at depths lower than the river:

"The rivers are the base of the groundwater flow system and are the discharge areas.

- There is little or no flow beneath the river
- Potential impacts would be confined to the vicinity of the HDD crossing"

Proof that water does indeed flow under the river exists with mapped cave systems in the Suwannee-Withlacoochee confluence region that actually go under both the rivers. Other evidence exists that shows deep ground water flow and that impacts could be felt Miles away in deep wells in the region. The water in these wells, some miles from the river, turns brown in color as the river water rises. The tannic water from the river only takes days to work its way through deep underground porous rock and caverns.

Falmouth Cathedral Cave System:

In the recent hearing, WWALS Watershed Coalition vs DEP and Sabal Trail, lead geologist for Sabal Trail Greg Jones testified that the Falmouth cave lies over 100' underground.

Professional Geologist Dennis Price's report shows that the cave system is closer to 30' below ground.

Quite a large discrepancy!

If you take a trip to Falmouth Spring you will see first hand that Mr. Price's figures are accurate.

The proposed pipeline route will have to go under Hwy 90 and CSX railroad and over the Falmouth cave all at the same spot. The depth of the pipeline at this location is unclear but, will probably be around 15' +/- leaving only about that distance above the cave.

As Dennis states in his report Sabal does not have a mitigation plan to deal with a collapse of the cave roof.

I have been referring to Falmouth as a cave (which it is) but it is also a spring conduit. Falmouth Cathedral Cave ends at Lime Run Spring. Both Falmouth Spring and Lime Run Spring are Magnitude one springs. Both these springs are ignored by Sabal Trail. On the Springshed map Sabal does not show a Springshed for these springs. The map also does not include them in the distance to the pipeline table. The table shows Madison Blue Spring as the closest Mag. 1 spring to the pipeline at 1.7 miles from the centerline of the route. Both Falmouth and Lime Run are closer to the route than Madison Blue.

Sabal Trail and FERC say that River crossings and sensitive areas such as the Falmouth Cathedral cave are of utmost importance and deserve the highest level of scrutiny.

I personally do not believe the proper due diligence has been done at either of these sites.

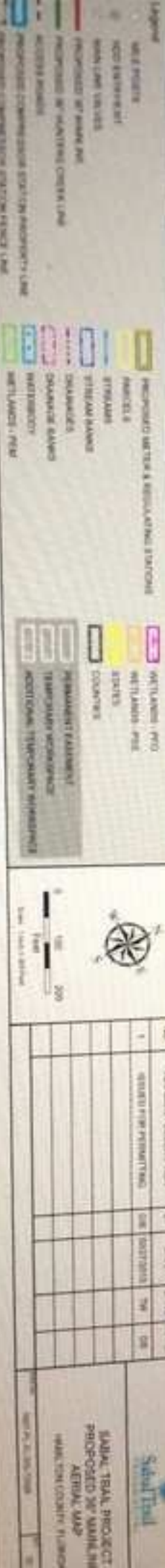
Sabal Trail should be required to start over with their environmental survey because, as I said earlier:

If we can not trust Sabal Trail to do their job here at these sensitive and critical sites why should we trust that Sabal Trail did the proper due diligence anywhere else.

Chris Mericle

WWALS Watershed Coalition Board Member

Waterkeeper Affiliate for the Upper Suwannee River

[illegible]

INITIAL TEST PROJECT
PROPOSED BY UNIT/MS
ACTUAL MAP
UNIT/MS COUNTRY NUMBER

- | | |
|-----|---------------------|
| 1 | WETLANDS: PFO |
| 2 | WETLANDS: PFO |
| 3 | ESTUARY |
| 4 | COASTAL |
| 5 | TRANSITION: ESTUARY |
| 6 | TRANSITION: ESTUARY |
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	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
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SUBAL TRAIL PROJECT
PROTECTED BY U.S. FISH & WILDLIFE SERVICE
AERIAL MAP

TABLE 6.5-1
Karst Features within 0.25 mile of the Sabal Trail Pipeline Route

State	MP	Distance/ Direction* (feet)	Karst Feature	Regional Karst Terrain
FL	266.3	-654	Cluster of very small sinkholes	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	266.3	-222	Small Sinkhole	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	266.7	1097	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	266.9	-995	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	266.9	1157	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.0	-1311	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.0	-1250	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.0	-1165	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.0	-1018	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.0	-908	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.1	-1196	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.1	-1146	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.1	-1038	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.1	-1011	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.1	-750	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.2	-1312	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.2	-1053	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.

TABLE 6.5-1

Karst Features within 0.25 mile of the Sabal Trail Pipeline Route

State	MP	Distance/ Direction* (feet)	Karst Feature	Regional Karst Terrain
FL	267.2	-968	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.2	-953	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.4	-752	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.4	909	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.6	631	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.6	650	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.6	1153	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.8	246	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	267.9	80	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	268.0	414	Modified Potential Sinkhole	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	268.1	90	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	268.1	1264	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	268.4	-263	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	268.7	-42	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	268.7	136	Potential Sinkhole	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	269.0	-1037	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.
FL	269.0	-960	Closed Topo Depression	Sinkholes are few, generally shallow and broad and develop gradually. Solution sinkholes dominate. Bare or thinly covered.

Legend

- First Magnitude Springs
- Second Magnitude Springs
- Third Magnitude Springs
- Fourth Magnitude Springs
- County Boundaries
- State Boundaries
- Water Bodies
- Major Highways
- Major Towns
- Major Waterways
- County Boundaries

This map and its data were prepared by the Florida Department of Natural Resources, Bureau of Geology and Earth Science, in cooperation with the Florida Department of Transportation, Bureau of Planning and Research. The map was prepared by the Florida Department of Natural Resources, Bureau of Geology and Earth Science, in cooperation with the Florida Department of Transportation, Bureau of Planning and Research. The map was prepared by the Florida Department of Natural Resources, Bureau of Geology and Earth Science, in cooperation with the Florida Department of Transportation, Bureau of Planning and Research.

North Springshed Analysis

Sabal Trail Transmission Pipeline
Various Counties, Florida

Spring Name	Magnitude	Closest Distance to the Pipeline within the Springshed (miles)
Madison Blue Spring	1	1.7
Blue Spring	2	8
Clayton Spring	3	8.7
Trapp Spring	4	9.1
Wichita Springs	5	9.3
Madison Spring	6	4.6
Wichita Springs	7	5.8
Wichita Springs	8	6.2
Wichita Springs	9	11.8
Wichita Springs	10	10.5
Wichita Springs	11	10.3
Wichita Springs	12	1.1
Wichita Springs	13	6.7
Wichita Springs	14	6.4
Wichita Springs	15	16.3
Wichita Springs	16	16.1

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OUTDOOR RECREATION & TRAILS!

CONNECTING THE DOTS BETWEEN TRAILS & TOURISM



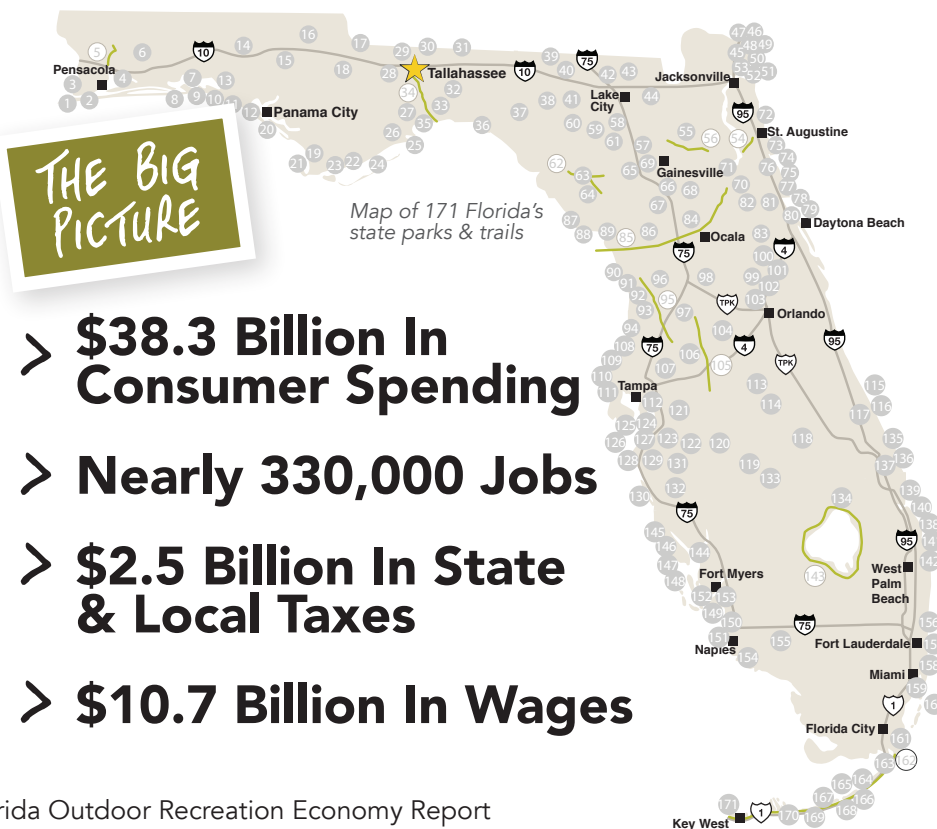
FLORIDA State Parks
...the Real Florida™



OUTDOOR RECREATION GENERATES BIG ECONOMIC IMPACTS FOR FLORIDA

Recreation has long served as an economic driver in Florida, as the state remains a major destination for national and international tourism.

Outdoor Industries Association, 2012. The Florida Outdoor Recreation Economy Report



FLORIDA STATE PARK VISITATION GENERATES NEARLY \$2.1 BILLION ON LOCAL ECONOMIES

With more than **1,600 miles of multi-use trails**, Florida State Parks receive over **27 million visitors annually**, creating **29,396 jobs**.

Honeymoon Island State Park had the greatest local economic impact totaling \$85.9 million.

x 1,000 VISITORS = ~\$86,000² DIRECT LOCAL IMPACT
²ibid

"The West Orange, Little Econ, and Cady Way trails in Orange County supported 516 jobs and an estimated economic impact of \$42.6 million in 2010."

East Central Florida Regional Planning Council (2011)

TRAIL FACTS

> Every \$1 spent on biking trails and walking paths could save approximately \$3 in medical expenses (American Heart Association)

> Every \$1 million spent on trails yields 9.6 jobs (University of Massachusetts, 2011)

TRAIL FACTS

➤ Trails add value to new homes and consistently remain the number one community amenity sought by prospective homeowners

(National Association of Homebuilders, 2008).

A 2011 study by the University of Cincinnati found that homes within 1000 ft. access to the Little Miami Scenic Trail increased in value by \$9K. The scenic, multipurpose trail beckons walkers, hikers, skaters and bicycle enthusiasts and also has horseback riding paths.

WHAT ARE FLORIDA VISITORS & RESIDENTS DOING OUTDOORS?

VIEWING WILDLIFE

The second most popular outdoor activity for both residents and visitors (SCORP 2011) and brings in almost **\$5 billion annually** to the state's economy.

Florida's rich diversity of wildlife attracts millions of visitors to public lands such as Florida's 171 State Parks, of which 96 are included as sites on the **Great Florida Birding and Wildlife Viewing Trail**.

PADDLING

During a year of average river flows, annual park attendance at **Suwannee River State Park** is usually more than 700,000 with **direct economic impact**

more than \$30 million, according to the Florida Park Service.

EQUESTRIAN ACTIVITIES

According to the Florida Department of Agriculture and Consumer Services, the **equestrian industry's economic impact on the gross state product is \$6.5**

billion. Florida's State Parks offer 1,889 miles of equestrian trails.

BIKING

According to the 2013 SCORP, nearly **25 million residents and tourists participate in bicycling in Florida annually**.

More than 18.4 million on paved trails and nearly 6.5 million on unpaved trails.

Biking paths are the second most desired facility for Florida residents.

The 2011 Outdoor Recreation Participation study highlights the tight link between recreation and tourism in Florida, determining:

98%

of Florida's tourists believe that outdoor recreation is important to them.

97%

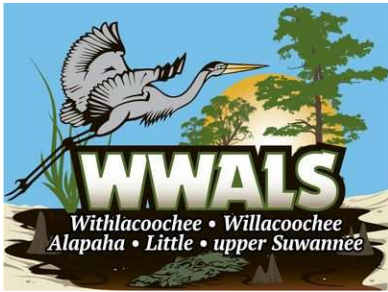
of tourists are satisfied with outdoor recreation opportunities in the state.

75%
(nearly)

of all Florida visitors participate in nature-based activities during their visit (Visit Florida, 2012).

Trails boost fitness and well-being, a connection with the outdoors and economic growth.

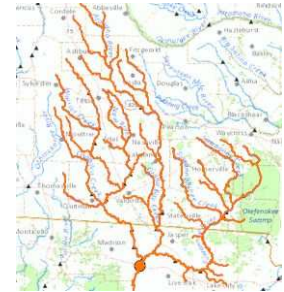
Visit www.dep.state.fl.us/gwt/ to find trail near you.



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January 19, 2016

To: Suwannee County Board of County Commissioners,

Dear Commissioners,

Thanks again for your hospitality at your meeting of December 15th.

Solar and wind can make coal go away with no need for natural gas.

The FPL representative who spoke didn't seem aware of what Southern Company CEO Tom Fanning said about solar power last June: "If somebody wants to buy distributed generation, I want to sell it to 'em." See Herman K. Trabish, UtilityDive, June 11, 2015, "Inside Georgia Power's move into the residential solar market: The utility says it will offer solar through an unregulated business, but installers fear possible anticompetitive impacts":

<http://www.utilitydive.com/news/inside-georgia-powers-move-into-the-residential-solar-market/400562/>

That meeting gave me deja vu about a few years ago when Georgia Power and Southern Company were claiming Georgia was too cloudy just like that FPL rep said last month about Florida. Yet Georgia turned into the fastest-growing U.S. solar market, as I mentioned in my letter to you of December 15th. Did Georgia suddenly become less cloudy? No more than Florida needs to.

Also FPL has been pushing for a pipeline like Sabal Trail since its previous attempt was rejected in 2009 by the Florida Public Service Commission. So the other excuse I've heard from Sabal Trail and FPL that the federal Clean Power Plan requires shifting coal plants to natural gas is just that: an excuse. The Clean Power Plan didn't even exist back then, nor in 2013 when FPL let the contract to Spectra Energy for Sabal Trail. And while that Plan does make coal plants more expensive to run, it actually puts some barriers in the way of natural gas., while promoting truly renewable energy, namely solar and wind power. See Rachel Cleetus, Union of Concerned Scientists, August 7, 2015, "Four Ways the Final Clean Power Plan Limits the Rush to Natural Gas":

<http://blog.ucsusa.org/rachel-cleetus/four-ways-the-final-clean-power-plan-limits-the-rush-to-natural-gas-839>

It's not just Southern Company's Fanning who finally gets it that solar and wind are the future already here now. See Gavin Bade, Utility Dive, June 10, 2015, "EEI 2015: 5 major utility CEOs on the transformation of the energy system: Chiefs of Edison International, AEP, Exelon and Southern hold revealing panel discussion",

<http://www.utilitydive.com/news/eei-2015-5-major-utility-ceos-on-the-transformation-of-the-energy-system/400530/>

What [Edison International CEO Ted] Craver was more confident about, however, was [Tesla CEO Elon] Musk's prediction that in the long run, a third of generation will be distributed, which could also hurt load growth for utilities. To that, Southern's Fanning had a simple answer: "If distributed generation is eroding your growth, own distributed generation!"

And [Dominion CEO Tom] Farrell's doing more than talk on that front. Last month, Georgia Power, a Southern subsidiary, announced it would enter the rooftop solar market.

While FPL continues to plan more fracked methane power plants, and recently bought its parent NextEra Energy's fracking operation in Oklahoma, NextEra itself is rapidly getting deeper into solar power. NextEra subsidiary Nextera Energy Resources has **solar operations in California, Nevada, New Mexico**, and even **New Jersey**, but not in Florida. Is Florida cloudier with less sun than New Jersey?

<http://www.nexteraenergyresources.com/what/solar.shtml>
http://webtest.nexteraenergyresources.com/pdf_redesign/Paradise.pdf

NextEra's Yieldco NextEra Energy Partners (NEP) is even **selling off its part of two Texas natural gas power plants**, shedding 2,988 MW of dirty gas burning. Sure, NEP is still conflicted, also owning **the NET Mexico Pipeline**, exporting fracked methane to Mexico. But at least NEP is looking to the sun.

<http://www.marketwatch.com/story/nextera-energy-resources-agrees-to-sell-texas-fossil-generating-assets-to-an-affiliate-of-energy-future-holdings-2015-11-27>

Neither Southern Company nor NextEra are pioneers in the solar market. Back in 2003 when Austin, Texas was growing 10% per year and actually had to find new power sources (unlike Florida, which could reduce its power consumption with conservation and efficiency), Austin Energy examined options of buying into a nuclear power plant (tried before: late, overbudget, huge political opposition), a coal plant (but Austin is clean industry city) and finally ran the numbers on solar power. Result: spending as much money as a coal plant would cost instead on rebates for solar panels on house and business roofs would get just as much power, installed faster, and distributed so it didn't all go out at once.

So that's what Austin Energy did, a dozen years ago when solar panel prices were 50% higher than now. They've been followed by Cobb EMC, Georgia Power, and it looks like now NextEra.

<http://www.l-a-k-e.org/blog/2012/04/austin-energy-changed-from-anti-solar-to-pro-solar-in-one-year.html>

As mentioned in my previous letter, even FPL is finally starting to deploy solar farms in Florida.

Still many people rightly wonder, how can we go straight to clean energy, and how fast? Fortunately, somebody has already researched that, for each of the 50 U.S. states and for 135 countries, showing how to convert the electrical grid to sun, wind, and water power within about a decade with no need for any new technology, and everything else by 2050. Sure, there is new technology being developed, especially in power storage, and any new tech will accelerate the conversion of everything to clean sun, wind, and water power. The conversion is already happening right now with existing technology,

especially next door in Georgia. The only real impediments are politics and backwards laws, and Florida is poised to pass a solar financing law much like the one Georgia passed last year.

<http://thesolutionsproject.org/>

Here's an overview by Bjorn Carey, Stanford News, June 8, 2015, "Stanford engineers develop state-by-state plan to convert U.S. to 100% clean, renewable energy by 2050: Mark Z. Jacobson and colleagues show that it's technically possible for each state to replace fossil fuel energy with entirely clean, renewable energy."

<https://news.stanford.edu/pr/2015/pr-50states-renewable-energy-060815.html>

Here's a 138-page peer-reviewed paper, "100% clean and renewable wind, water, and sunlight (WWS) all-sector energy roadmaps for the 50 United States," Energy Environ. Sci., 2015, 8, 2093:

<https://web.stanford.edu/group/efmh/jacobson/Articles/I/USStatesWWS.pdf>

So why would FPL want to add still more natural gas when Florida already gets 60% of its power from that one source, thus putting the whole state at risk of the vulnerabilities of a few pipelines into the state when the sun shines on everyone and the wind blows offshore? It could be because the old ways bring easier profits through PSC-guaranteed annual profits for big baseload capacity power plants. Profits at the expense of Suwannee County landowners and taxpayers, not to mention FPL ratepayers.

But Southern Company's Tom Fanning answered that, too, in the same article about the 5 utility CEOs:

Distributed generation, Fanning said, is not disruptive. In fact, it's a "natural evolution of central station generation."

Asked by Greentech Media during the media availability how it responds to anticompetitive concerns from solar providers, Fanning said that his utility is simply responding to customer desires. Consumers want solar, and they want it from a trusted provider, so Georgia Power will enter the market. From his perspective, distributed generation is little different from central station generation, except for the benefit that it's closer to the customer, minimizing line losses.

Fanning wasn't saying any of that a year ago, I can say from attending Southern Company stockholder meetings for years. That's how fast a big utility can turn to the sun. Back to the article:

Utilities know more about the grid than anyone, [Exelon Corp. CEO and EEI Chairman Nick] Akins ["who runs the biggest coal generator in the country"] said in backing up Fanning, so they should be the distributed generation providers if consumers want it. What's more, he said, utilities can ensure that distributed generation can be deployed for all customers, while solar installers have tended to eschew low income communities with fewer means to pay for their product.

Southern Company has the biggest private utility R&D operation in the country. If it and Exelon and Dominion are moving ahead into solar power, with even FPL's parent NextEra Energy apparently joining them, FPL is a drag on the economy, water, air, and health of the state of Florida by pushing more fracked methane when solar power is already here right now ready for the Sunshine State.

FPL probably didn't tell you most of this, but you can see it's all well documented.

As an advocate of watershed conservation and stewardship, WWALS has long opposed new pipelines and promoted solar power, including sending two board members to testify at a Georgia Public Service Commission meeting in June 2013 shortly before the GA PSC required Georgia Power to buy twice as much solar power as it wanted, putting Georgia Power and Southern Company on the path to a clean solar future they finally chose last year, turning Georgia into the fastest-growing U.S. solar market. WWALS now advocates the same for Florida.

Which do you want for Suwannee County? Bringing up the caboose of the 20th century with still more natural gas pipelines taking easements from local citizens' property and risking their air and water while drilling under the Suwannee and Santa Fe Rivers and the Falmouth Cave System and risking our sole-source of drinking water, the Floridan Aquifer? Or getting on with the conversion already under way to solar power inland and wind offshore that doesn't require eminent domain, doesn't leak, burn, explode, or cause sinkholes, plus is faster to install and more dependable?

Thanks again for your hospitality, and I write in the spirit I'm sure we all share of conservation and stewardship of all our waters.

Sincerely,

[/S]

John S. Quarterman, President

229-242-0102

WWALS Watershed Coalition advocates for conservation and stewardship
of the Withlacoochee, Willacoochee, Alapaha, Little, and Upper Suwannee River watersheds
in south Georgia and north Florida
through awareness, environmental monitoring, and citizen activities

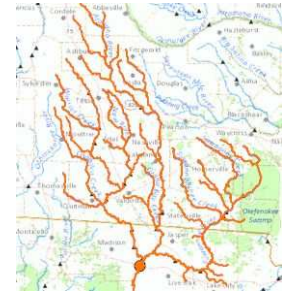




WWALS Watershed Coalition, Inc.

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February 1, 2016

To: Suwannee County Board of County Commissioners,

Dear Commissioners,

It's good to see you have a workshop about Sabal Trail's proposed river crossings on the agenda for tonight. WWALS, including its members in Suwannee County, continues to oppose any such crossings of the Suwannee River or the Santa Fe River, or anywhere in the fragile karst terrain of central Florida and south Georgia containing our drinking water in the Floridan Aquifer.

Here's more evidence that solar and wind can make coal go away with no need for natural gas. A new study shows adding interstate high-voltage DC electric power lines to load-balance across the U.S. would enable a very rapid shift to solar and wind power, dropping CO2 emissions by 80% from 1990 levels by 2030, five years from now. Florida needs to do its part by deploying solar power for local production during sunny days, rather than wasting \$3 billion on yet another natural gas pipeline.

"Better power lines would help U.S. supercharge renewable energy, study suggests," by Puneet KolliparaJan., in Science, 25 January 2016,

<http://www.sciencemag.org/news/2016/01/better-power-lines-would-help-us-supercharge-renewable-energy-study-suggests>

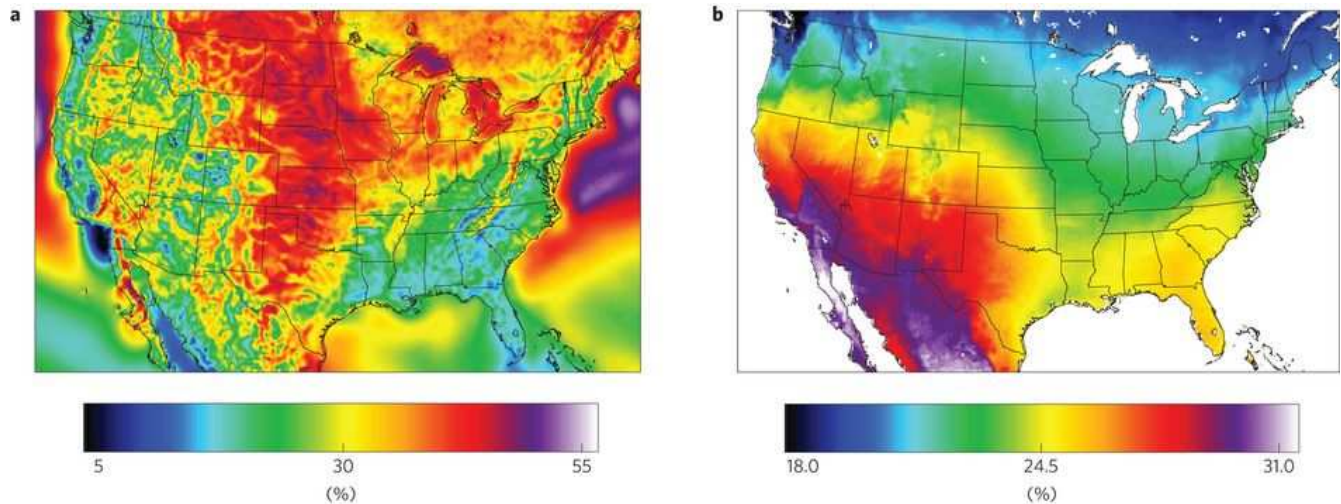
"Analysts have long argued that nations aiming to use wind and solar power to curb emissions from fossil fuel burning would first have to invest heavily in new technologies to store electricity produced by these intermittent sources—after all, the sun isn't always shining and the wind isn't always blowing. But a study out today suggests that the United States could, at least in theory, use new high-voltage power lines to move renewable power across the nation, and essentially eliminate the need to add new storage capacity."

"This improved national grid, based on existing technologies, could enable utilities to cut power-sector carbon dioxide emissions 80% from 1990 levels by 2030 without boosting power prices, researchers report today in Nature Climate Change."

"Future cost-competitive electricity systems and their impact on US CO2 emissions," by Alexander E. MacDonald, Christopher T. M. Clack, Anneliese Alexander, Adam Dunbar, James Wilczak & Yuanfu Xie, in Nature Climate Change, 25 January 2016, doi:10.1038/nclimate2921

<http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate2921.html>

See for example the wind and solar power maps from that article, which show that Florida has more sunlight on average than Georgia (righthand map), and wind power elsewhere (lefthand map) can serve to balance cloudy days in Florida.

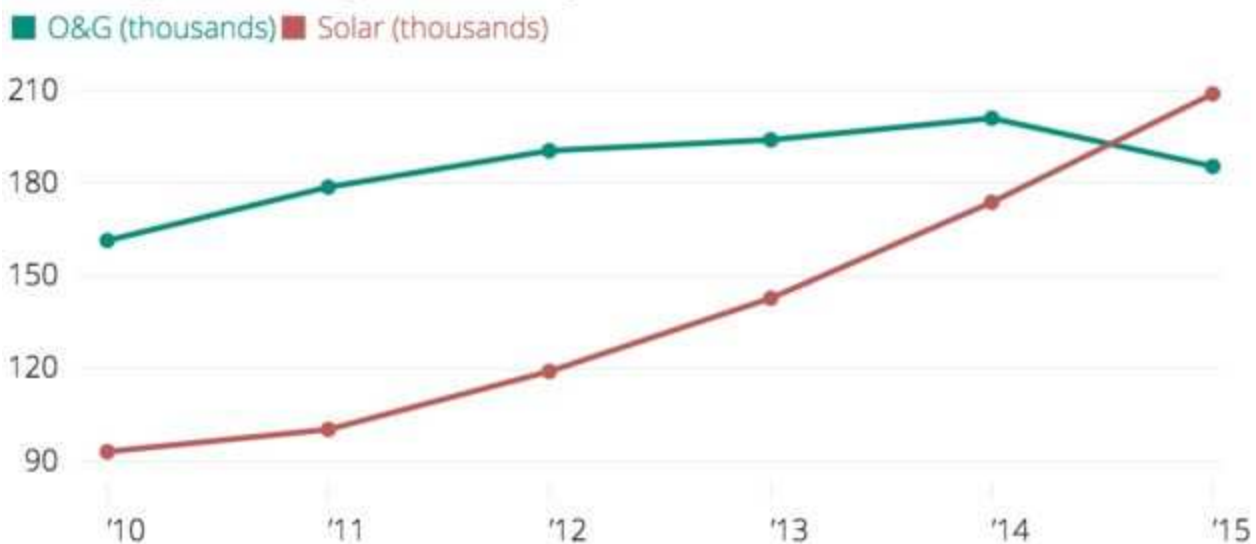


Such power lines could go in existing rights of way, and would not require drilling under any rivers.

And solar power brings local jobs. There are now more U.S. jobs in the solar industry than in all of oil and gas extraction; see “There Are Now More Solar Jobs In America Than Oil Extraction Jobs”, by Shane Ferro, Huffington Post, 14 January 2016,

http://www.huffingtonpost.com/entry/solar-jobs-rising_us_569409e5e4b0cad15e65be87

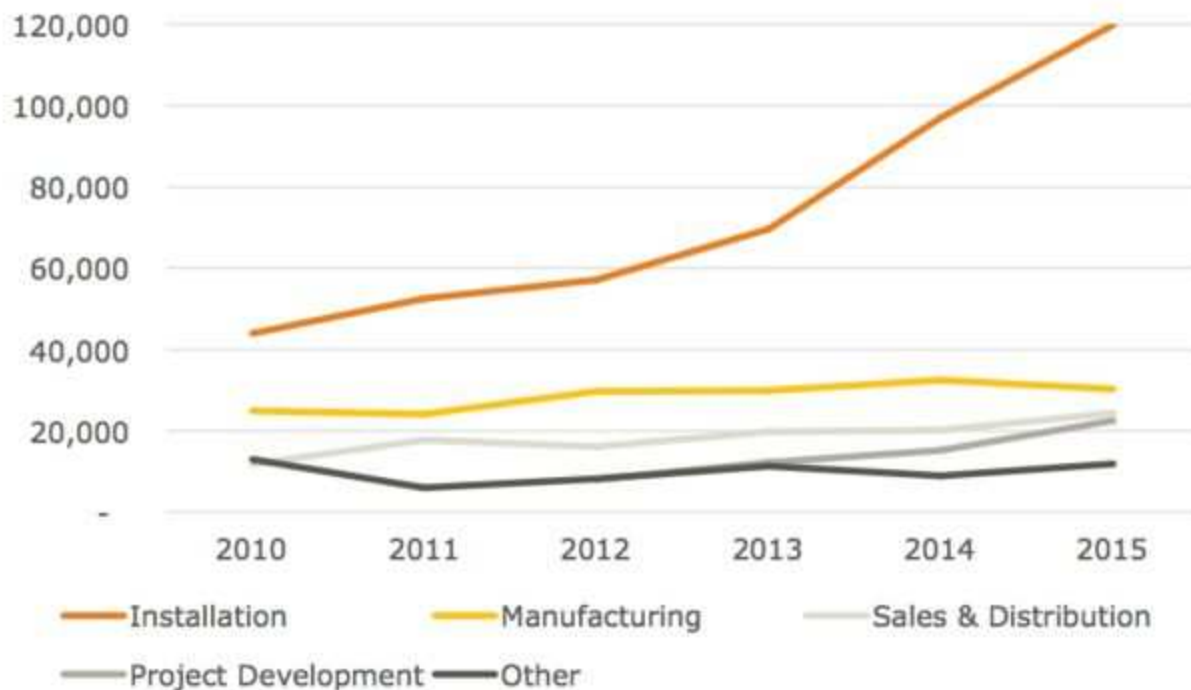
Energy Jobs By Industry



The Huffington Post

Source: The Solar Foundation and the Bureau of Labor Statistics

Solar jobs keep booming, while oil and gas jobs remain flat or are declining:



That article notes that solar jobs don't pay as well as oil or gas drilling, but on the other hand pipeline installation crews come in from somewhere else and do little for the local economy, while many solar jobs are local, and solar power directly reduces local electric bills.

Suwannee County can lead the way to the clean, safe, profitable solar future of Florida. A good next step beyond the resolution you already passed asking for the compressor station to be moved would be to oppose FPL and Spectra Energy's plan to drill under the Suwannee and Santa Fe Rivers for the unnecessary, destructive, and hazardous Sabal Trail pipeline.

For the rivers and the aquifer,

[/S]

John S. Quarterman, President

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